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ABSTRACT

Analysis has indicated that research and evaluation is the weakest component of the population education programs in Asian and Pacific countries. In synthesizing 95 of these research and evaluation studies, this abstract-bibliography provides lessons for implementing improved research operations in this region. Material is divided into six sections. Section 1 cites studies of knowledge, attitude, and behavior of teachers, students, and parents toward population education; section 2, evaluation of personnel training; section 3, curriculum and materials development; section 4, teaching methodologies; section 5, evaluation of classroom instruction; and section 6, program evaluation. Each section has three parts: analysis of the studies, exemplary studies, and other studies. The latter two sections contain abstracts which include bibliographic information, objectives, research design, and funding. The volume also contains subject and country indexes. (LP)

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ED238802

Population Education Programme in Asia: What Research Says

Abstract-Bibliography
Series 4

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INTRODUCTION

This issue is the fourth in a series of abstract-bibliographies dealing with various concrete issues and problems raised by population education workers in the course of undertaking population education programmes. This fourth volume focuses on the specific problems faced by the participating countries when researching, evaluating and monitoring their population education activities. A brief analysis of project documents shows that research and evaluation is the weakest component in the population education programme. Research is seldom included in the work plan of activities. A baseline survey of the knowledge, attitude and behaviour of the programme and audiences is the only commonly found research activity. This has been ascribed to factors such as funding constraints or the lower priority assigned to research as compared to curriculum or materials development and training activities. Very often there is also a scarcity of expertise in the area of research.

Nevertheless, the last 12 years of the programme's existence in Asia and the Pacific has seen a few sporadically conducted research and evaluative studies. Most of these research studies focus on baseline surveys such as: (a) students', teachers' and parents' knowledge and attitude towards population education; (b) content analysis of existing syllabi and textbooks; and (c) socio-cultural studies for planning and implementing population education programmes. A few countries have also gone into evaluative research by evaluating the effectiveness of their training programme, curriculum development and instructional materials, teaching methodologies and classroom instruction. This volume synthesizes these research and evaluative studies. By doing so, it is hoped that the findings of the studies can provide lessons and guidelines for countries to learn from, enabling them to identify the weaknesses from the successes and adopting those useful lessons which can help improve their own respective programmes. It is also hoped that by highlighting the limitations of the research studies so far undertaken in the region, countries will begin to design and implement improved research operations.

Format

This abstract-bibliography is divided into the following sections:

Section One	- Knowledge, attitude and behaviour of teachers, students and parents towards population education and population issues
Section Two	- Personnel training
Section Three	- Curriculum and materials development
Section Four	- Teaching methodologies
Section Five	- Evaluation of classroom instruction
Section Six	- Programme evaluation

Each section has three parts:

A. Analysis of the studies;
B. Exemplary studies; and
C. Other studies.

The analysis for each group of studies makes generalizations based on their findings and critically looks into the objectives, sampling procedures used for data collection, and analysis. These generalizations gain more significance when the implications and research trends emerging from them are presented in the summary. Some recommendations are made based on these emerging trends.

The exemplary studies and other studies are abstracts containing title and bibliographic description, identification number, objectives, the research design (which includes the sampling and data collecting), the analysis procedures, findings and descriptors and the source of the study. The exemplary studies are model studies from which the countries can learn and which they may like to replicate, adopt or adapt to evaluate their own respective population education programmes. The other studies lack the detail and thorough research design of the exemplary materials but are included because their objectives and findings are meaningful and substantive enough to contribute to the analysis.

The volume also contains subject and country appendices.

It will be appreciated if readers will bring to our attention the research studies that have not been included in this publication and send copies to the Population Education Clearing House for possible inclusion in a future update of this series.

Purpose of the studies

After over a decade of population education in Asia and the Pacific, this is the first attempt to review and synthesize the available research and evaluation studies at a regional level. At the national level, India and the Philippines have attempted such an exercise. While the Indian publication entitled, *A decade of population education research in India* 1/ included research and evaluation studies mostly undertaken by other institutions, universities and individuals, the Philippine publication entitled, *Research abstracts of population education studies* 2/ included only those undertaken by the national population education programme.

This fourth in the series of abstract-bibliographies abstracts, synthesizes and analyses the available research and evaluation studies on population education undertaken in Asia during the past 12 years. The majority of the researches are those previously acquired by the Population Education Clearing House from various national population education projects in Asia. In order to make this series as comprehensive as possible, the Clearing House wrote to the national population education programmes and universities carrying out teaching and research programmes, requesting copies of their researches or their abstracts.

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1. India. National Council of Educational Research and Training. Population Education Unit. *A decade of population education research in India - a status study*, by D. Gopal Rao. New Delhi, 1981. 78 p.
2. Philippines. Ministry of Education and Culture. Population Education Programme. *Research abstracts of population education studies*. Manila, 1980. 58 p.

The breakdown of studies included here is:

India	- 33
Thailand	- 23
Philippines	- 21
Rep. of Korea	- 9
Bangladesh	- 8
Indonesia	- 2
Nepal	- 1
Unesco	- 3
	100 Total

It should be noted that the studies in India and Thailand were undertaken by the universities and other institutions; the Philippines and Bangladesh studies were generally directly conducted or sponsored by their respective national population education project.

Types of studies

While there are many baseline surveys which look into the knowledge, attitude and behaviour of students, teachers and parents with regard to population issues, family planning and the introduction of population education in the schools, very few studies deal with the substantive and methodological aspect of population education. Only three to four countries appear to be evaluating the different components of their programme and even then, this is being done irregularly. In addition to the knowledge, attitude and practice (KAP) surveys, the other studies included in this section aim at determining the effectiveness or efficiency of personnel training, curriculum and materials development, teaching methodologies, classroom instruction and programme evaluation.

Duration of research

All of the research studies included here were undertaken in the 12 years from 1970 to 1982. A number of baseline surveys on the knowledge, attitude and behaviour of the target audiences and content analysis of curriculum materials were carried out from 1970 to 1972. During 1973, 1974 and 1975 more countries started placing a priority on research and undertook more studies than previously. Most of these studies were dissertations conducted under the auspices of the universities rather than the national population education programme. The years 1975 to 1978 saw a marked decrease in the number of studies. In 1979, when most national population education projects were being pressured to evaluate their population education projects, there was another increase in the number of studies. These were either formative or summative evaluations, on the effectiveness of the various components of the programme with the end view of using the results for further improvement of their training and curriculum and materials development programmes. There was a status review of the programme and an end-of-the project evaluation. This analysis presents a trend in the development of research and studies in relation to the needs and growth of the population education programmes in the countries.

Sources of studies

Studies emanating from the universities (39.4 per cent) and the national population education projects (33.4 per cent) comprise most of the materials included in this volume. While all of the studies generated by the universities came

in the forms of theses and dissertations, the studies from the national population education programmes came in the form of evaluative studies with normative-descriptive, quasi-experimental or experimental designs evaluating the effectiveness of the different programme components. Four per cent were derived from journals, 23 per cent came from population and family planning agencies or other research institutions and there were three studies from Unesco.

The sample

Out of the 100 studies, 49.5 per cent cover urban samples, 30.3 per cent cover both urban and rural samples while 20.2 per cent focus on the rural sample only. A little more than half of the total number of studies (53 per cent) cover local samples only - meaning that they were undertaken in one area only either in one city, in a village or in one province. This is also followed by a high percentage (23 per cent) of studies covering a nationwide sample. Eight per cent of the studies were conducted in more than one locality ranging from two to five places; seven per cent cover a regional sample, meaning three or more provinces or districts in one region; and 3 per cent include an international sample. Five studies did not give any information on this particular aspect. The predominance of urban sample and studies conducted in only one area in most studies is obvious.

The sample size

Forty-six per cent of the studies made use of samples varying from 50 to 100 respondents. These were usually surveys measuring changes in knowledge and attitude after exposure to population education courses among students and teacher-trainees. Thirteen per cent of the studies covered a sample size of 550 to 700 respondents. Nationwide studies used a sample size ranging from 1,500 to as high as 176,000 but most averaged 2,000 to 3,000 respondents. More than half of the studies used teachers (38.4 per cent) and students (35.4 per cent) separately as their samples. There was less use made of student/teacher samples or teacher/parent combinations. Eight per cent of the studies used a mixture of all population education personnel. Most studies (60 per cent) took their samples from more than two schools, i.e. on the average of 10 schools and 30 per cent were conducted in one school only.

Study design and approach

Since the majority of the studies deal with the description of knowledge, attitude and behaviour of students, teachers and parents with regard to population education, 60 per cent of the studies are descriptive baseline surveys making use of questionnaires and interviews as instruments for gathering data. One third of the studies, went one step further by determining changes in the knowledge, attitude and behaviour of students and teachers after their exposure to population education instruction and curriculum materials. These studies either make use of one experimental group approach or a combination of experimental and control group approaches and follow the experimental design, either quasi- or scientific. Five per cent of the studies use the documentary content analysis; one study is a critique of the

curriculum materials by subject specialists and another makes use of a diary and observation technique to monitor the effectiveness of teaching in the classroom.

Data analysis

In most of the exploratory surveys, the findings and trends have been analysed by finding out the frequency distribution and their percentages. In experimental studies, which are either using a one-group approach or more than one-group approach, statistical analysis has been applied to find the significance of the difference between the means of the pre- and post-tests. In finding out the effectiveness of the two or three teaching methods, the mean achievement score of the groups taught by different methods has been computed. The following statistical tests have been variously used: analysis of variance and covariance, T-tests and chi-square, tests of correlation and multivariate analysis, correlation with the G.P.A. 1/ and other in-depth statistical analysis.

Limitations of the studies and analyses

1. One of the most important limitations of the synthesis and analysis done for each group of the research studies presented in all the sections is the unavailability or absence of the complete and original manuscripts of about 50 per cent of the research included in this publication. Most of the countries responded to Unesco's request by sending only the research abstracts. Many of the abstracts did not contain some significant details such as definition of terms, description of sampling and sampling procedures, data analysis and limitations of the study which made it difficult to conduct a fair and equal comparison of some items across all the pertinent research studies.

2. In going through the generalizations resulting from a comparative analysis of the studies, the readers are cautioned to carefully consider a number of factors which may not support a direct and equal comparability among the studies and their findings. For example, definition of terms differ from country to country. What may be considered as a controversial population topic in one country may not be so in another. The definition of population education is not the same for all countries especially in China and the Republic of Korea where, early on, it is regarded as family planning and population control. Also when one talks of teacher competence in the subject matter and mastery in the skill of using the teaching methodologies, countries may have established different sets of acceptable standards measuring mastery and competence. As a corollary to this, the definition and use of certain teaching methodologies may also be different among the countries. Furthermore, the teachers' and students' abilities and skills and their motivations may not necessarily be at the same level for all

1. G.P.A. = Grade Point Average. A value calculated to summarize the relative academic standing of a student (such as rank in class) on the basis of grades received and amounts of work done in courses.

countries. Lastly, the various socio-cultural settings in which the studies were conducted also account for differences or inconsistencies in the findings.

3. Another limitation is the size of the sample which varies considerably, from as small as 50 respondents to as big as 176,000. A number of the studies have ambitious objectives but make use of small sample. One example is a study which attempts to determine the impact of the population education programme on the knowledge, attitude and behaviour of the students after they have been exposed to it for the past three years. It includes for its sample only the male students in one city. Another factor which restricts the value of the research findings is the difficulty in comparing the results of a study which utilized grade I pupils as respondents with those which made use of high school students as a sample despite the fact that the research objectives and design may be similar for both.

4. Many of the studies are dissertations conducted in the universities and may necessarily have been undertaken in contrived settings whereas if they were undertaken by the national population education programmes, conditions would have been different as there is easier access to the use of actual classroom situations and other facilities on population education.

5. The studies also differ from one another in terms of the various sets of questions and intervening variables used as subject of investigation. For instance, while 20 studies raise the question of how population education should be taught in the schools, only three ask who should teach it. Or while 10 studies include the demographic variables such as age and sex as factors affecting knowledge and attitude change, only two studies look into how subject areas or types of schools have affected such changes. In other words, while it may be easier to generalize on findings emanating from many studies, it is a bit riskier to do so for findings emanating from only three or four.

6. There is also a statistical problem having to do with the interpretation of a non-significant difference. Some studies interpret a non-significant result conservatively while others interpret it liberally. The liberal interpretation is that the two groups being compared using different approaches are more or less equal, meaning to say one method is just as good as the other. The more conservative interpretation is that one group could be better than the other but that the possibility that the differences observed between the two groups is simply a matter of chance cannot be discounted. Thus, if out of 100 comparisons, 30 are significantly in favour of the traditional approach and 30 yield non-significant differences, the conservative interpretation is: 'in 40 out of 100 comparisons, the discovery approach was superior to the traditional approach'. The liberal interpretation, however, is: 'in 70 out of 100 comparisons, the discovery approach proved to be as good as, if not better than, the traditional approach'.

Section One

KNOWLEDGE, ATTITUDE AND BEHAVIOUR OF TEACHERS, STUDENTS AND PARENTS TOWARDS POPULATION EDUCATION AND POPULATION ISSUES

Section One

KNOWLEDGE, ATTITUDE AND BEHAVIOUR OF TEACHERS, STUDENTS AND PARENTS TOWARDS POPULATION EDUCATION AND POPULATION ISSUES

A. Analysis of the Studies

Either before a national population education programme is conducted or during the first phase of its implementation, various countries in Asia and the Pacific undertake baseline surveys to determine the knowledge, attitude and behaviour of their target audiences - the teachers, students and parents - towards population education and related issues to serve as guidelines for programme formulation and implementation. The surveys aim to find out how much the respondents know of the population problem and its effect on the welfare of individual, family, community and country; how much they know of government efforts and policies to solve this problem through its family planning programme and population education in schools; what their attitudes are towards these programmes and the Government's intervention; and most of all, how they perceive population education, their reactions to its introduction in the schools and how it can be effectively taught.

There are 44 examples of baseline surveys included in this section from India (24), Thailand (9), Philippines (4), Republic of Korea (4), Bangladesh (2) and Nepal (1) conducted between 1970 and 1982. Twenty-one studies are found in Section Two as exemplary research studies while the rest of the 23 studies are included in Section Three. The studies cited are, by and large, surveys making use of the questionnaire as an instrument for gathering data. Interviews and opinionnaires were also, but less frequently, used. The questionnaires are commonly divided into three groups: a knowledge test, an attitude test mostly using the Likert scale and an opinion survey. The questionnaires were either self-administered or administered by the research project staff.

The studies can be classified into three groups based on their objectives. The first group of 20 studies, surveys the knowledge, attitude and behaviour of teachers, students and parents with regard to three areas: the population problems and programme; family planning practices and the introduction of population education into the school curricula. The second group of 16 studies, focuses on determining knowledge, attitude and behaviour only with regard to the introduction of population education in school curricula and the third group of eight studies, deals only with knowledge, attitude and behaviour about family planning and population issues, excluding population education.

More than half of the studies are straight surveys, simply describing knowledge, attitudes and practices (KAP) without relating them to other intervening conditions. The rest correlate the findings with regard to change or lack of change in knowledge, attitude and behaviour to a number of intervening variables such as demographic characteristics e.g., age, sex, marital status, education, level of income, employment, size of family; and types of schools, levels of school (primary, secondary and tertiary), discipline or subject areas, beliefs and professional

commitments. The studies usually focus only on one type of respondent. However three studies went beyond this by comparing responses of three types of respondents. They asked, 'Given a set of intervening variables, how do the knowledge, attitudes and behaviour of teachers, students and parents compare? Do the variables account for any significant differences in the results?' While 17 studies include only the teachers as their sole sample, 14 include only the student sample, six deal with both teachers and students, five with both teachers and parents and one focuses on the three categories of respondents.

Many of the studies, especially those using correlations, are not directly comparable. They differ from one another in terms of the various sets of intervening variables used. For instance, while a few studies determine how demographic characteristics have affected changes or lack of changes in KAP, a few determine this by using beliefs, professional commitments, disciplines, types of schools and school levels as intervening variables. Furthermore, not all studies have a similar set of questions. While 20 studies raise the question on awareness about population problems, only a few attempt to find the sources of information for this while the rest ignore this issue. All the studies ask how population education should be taught in the school but only three ask who should teach it. This means therefore, that it would be easy to generalize on findings emanating from a big number of studies but difficult to do so if the findings only come from three or four studies. Nevertheless, findings emanating from two or three studies have been included, calling the attention of the readers to this limitation. Another limitation is the size of the sample which varies considerably, from as few as 50 respondents to as many as 3,149 respondents. The majority used simple random sampling procedures of respondents in several schools selected in one area or locality. A few used purposive sampling of all students or teachers in a certain single school in one area or locality. Many studies used a nationwide coverage, using stratified random sampling by area, school and then respondents, usually including five to fifteen per cent of the targetted total population. Still others used a semi-nationwide coverage which means that they included a certain number of regions, states or districts in the country. Lastly, the analysis of findings should be viewed taking into account the various cultural settings in which the studies were conducted. Given the above qualifications on the difficulties of interpreting the research studies, the following generalizations may be made:

Population and family planning

1. The majority of teachers, students and parents were aware of the specific consequences that a rapid population growth would bring to the people's quality of life and their country's development. All three types of respondents generally had little knowledge of the basic demographic characteristics such as population size, growth rate, age ratio, migration rate and the like. Very few knew much about the national population policies and programmes that their respective Governments have taken up to solve the population problem.

2. Of the 10 studies which

probed the knowledge of teachers and students on the family planning programme and the various contraceptive methods being propagated by the programme, the majority knew and favoured them, with more students favouring the programme and the use of contraceptives than the teachers. However, everyone was against legalizing abortion and any Government's direct intervention to impose a limited family size on the people.

3. Of the five studies which raised the question as to which family planning methods are the most popular, rhythm, sterilization and condoms were the most frequently mentioned in that order.

4. Culled from only three studies, the information about population and family planning were derived mostly from the printed media e.g. newspapers and magazines, followed by information gained from friends, hospital and clinic personnel and lastly from television and radio.

5. The respondents' attitudes towards various population issues, and pro-natalist and anti-natalist beliefs showed trend towards positive statements about population issues if they were from countries with long experience of population education programmes. Those from countries such as Nepal, where population education has just been recently established, had mixed feelings. The majority agreed that family size can be planned; having too many children will affect the health of the mother and spacing is therefore necessary to maintain the health of the mother; that small family size is necessary for a happier and more comfortable life; that overpopulation leads to economic and social instability in the country; that late marriage is one of the methods that can be used to control family size and that population, planned parenthood and family planning programmes should be taken up to educate the masses. A study from Nepal shows misconceptions among the teachers and students. For instance, although most respondents felt that a big family is not a blessing, there were still many who indicated that children are economic assets and insurance for old age. The majority also thought that while big families add to social problems it is not morally irresponsible of a person to have more children than can be adequately cared for. Although they agreed that rapid population growth is the major cause of poverty, very few felt that government should take direct measures to prevent it and very few agreed that controlled population growth is essential for the economic development of the country. But regardless of whether the studies emanate from countries with long established programme or recent ones, there was still a clear indication among the respondents for sex preference especially for sons.

6. The preferred age at marriage for females varied. Thailand and the Philippines preferred that females should get married between 25 and 29 years old, but India and Bangladesh said that women should marry between the age of 20-24 or 21-25 years old. There was general agreement that males should marry between 26 and 30 years old.

7. Most of the few studies which raised the issue showed the respondents' preference for nuclear rather than extended families.

8. Most studies also showed the respondents' preference for 2-4 children but one study from Thailand gave various ideal sizes of families corresponding to various levels of incomes of families.

9. The 17 studies which correlated knowledge, attitude and behaviour to various intervening variables gave mixed findings. Taking sex as a dependent variable, five studies showed that male students and teachers were more knowledgeable about population issues than female students and teachers while two studies showed the reverse. However, in all the pertinent studies, sex accounted for a statistically significant difference in knowledge and attitude. The level of income also made a significant difference - the higher the income one has, the more favourable he or she is towards family planning and the population programme. One study showed that higher education means more positive beliefs towards population education. While one study revealed that religion does not have any significant influence on the KAP, another study showed that teachers of some religious faiths are less knowledgeable and open towards population issues than others. Again, while one study showed that there was no significant difference in knowledge among primary, secondary and tertiary school teachers and students, another study showed that students in higher classes had higher knowledge base than those from the lower classes. However, regardless of school levels, the majority showed favourable attitudes towards population issues. Some studies showed that teachers from social sciences and physical education knew more than the rest, others showed that teachers in medical and natural sciences knew more and had more favourable attitudes than those coming from disciplines such as education. One study, in fact, showed that previous training and attendance at population meetings and workshops for the purpose of integrating population education into school subjects did not have any effects in changing the respondents' attitudes.

Population education

1. The majority of the studies showed that teachers and students were aware of the efforts being made to introduce population education in the schools in their respective countries. However, very few actually knew the true definition of population education and in fact regarded it no differently from family planning and population control.

2. Most agreed that population education should be introduced in the school. They thought that by doing this, the school would create the right attitude and behaviour among students towards family size and responsible parenthood and help check rapid population growth. Those few who did not agree reasoned that students are too immature to accept such controversial topics and the subject matter is difficult to understand, much less teach.

3. An overwhelming majority preferred that population education should be integrated with other existing school subjects rather than taken as a separate subject. The most frequently mentioned subject in which it should be integrated was social studies. The other less frequently mentioned subjects were civics, science, biology, geography, economics, health, mathematics and language.

4. Of the few studies which raised this particular issue, it is revealed that most teachers felt that they were not prepared to teach the subject and would rather not teach it. While one study recommended that teachers should teach population education, another study preferred that outside experts be invited to teach the subject.

5. Fifteen studies included the question of the school level at which population education should be introduced. The majority of teachers and students generally preferred that it be introduced in high school and college. However, a few studies specified what types of population subjects could be taken up in the primary, (e.g. overpopulation and need for the small family), in high school (e.g. concept of small family and its advantages, demographic concepts, population programme and Government policies, human reproduction) and in the university (e.g. family planning, contraceptive uses and human reproduction).

6. Six studies suggested that the following contents should be taken up in teaching population education: population and its relationship to various aspects of quality of life, demographic concepts, trends and consequences of population growth, solutions to population problems, human reproduction, family life and family planning. Two studies are against the inclusion of human reproduction and family planning in population education.

7. As to whether sex education and other controversial topics (such as naming of sex terms, pictures of human reproductive organs, contraceptive devices) should be taught as part of population education, the majority of the teachers, parents and students were in agreement. They said that by including these topics, students will correct their wrong ideas, help build their moral character and develop a balanced personality. Those few who were against it said that children are still too young to learn about these topics and which may eventually lead to immorality.

8. Most thought that sex education should be integrated with other subjects notably biology, health and hygiene and social studies. It should be taught by teachers and doctors alike.

9. The contents or topics to be taken up in teaching sex education include health and hygiene of sex, anatomy and physiology of reproductive organs, contraceptive methods and bodily changes during puberty.

10. Most said that sex education should be introduced in high school and college while one country, the Philippines, favoured its teaching, more specifically the naming of the sex organs in health and hygiene practices, as early as grade one in the primary school.

11. There were mixed findings on the effect intervening variables have had on knowledge of and attitude towards population education. The studies showed that men were more positive in their attitude towards population education than women and male teachers were more willing to teach it. Teachers in the nursing and medical fields knew more about family planning and contraceptive use and had more favourable attitude toward population education than those coming from the

field of education. Lastly, previous attendance and participation in workshops and seminars for the purpose of integrating population education into home economics subjects were not effective in changing the attitudes, beliefs and commitments to population education among home economics teachers. Moreover, those groups who had less seminar experience appeared to have more positive attitudes towards population education. Furthermore, teacher educators whose main interest were in the food and nutrition area had more positive quality-of-life beliefs than those who had their major interests in child development and family relations. Age, family size and years of teaching had no influence on their attitudes towards population education, quality-of-life beliefs and professional commitments.

Summary of research trends and implications

Most of the studies in this section generated mixed findings. Even the few studies which attempt to correlate the effects of intervening variables such as the demographic characteristics with the knowledge, attitude and behaviour of the students, teachers and parents also failed to show definite trends and conclusions. It is suggested future KAP studies should not only include an investigation of the knowledge or attitude *per se* but should correlate these with other variables such as age, sex, marital status, education, employment, place of residence, socio-economic status and most importantly take into consideration the cultural and anthropological factors. The data analysis used in these studies have mostly been frequency distribution and percentages: to be able to determine a more valid correlation between the intervening variables and the outcomes, more sophisticated and in-depth statistical analysis treatments should be applied on the data.

A specific trend which emerged from the studies showed that teachers and students were aware of the population problems in general but knew little about basic population issues and demographic concepts nor were they sufficiently knowledgeable about the government's intervention programmes. This is a gap in knowledge which the countries' programme trainers need to take into account in conducting their teacher training.

It was also commonly found that the teachers, students and parents were averse to any measures by the government to impose a limited family size. The implication to curriculum development is quite clear: population education materials should avoid lessons that will force the students to think that families should only be limited to one or two children, except in the People's Republic of China where it is Government policy.

Countries with newly established programme should be given a more in-depth and comprehensive orientation on the various socio-cultural issues surrounding the population issue and the population education programme. The results of the studies showed that most misconceptions arose amongst respondents belonging to countries with new programmes. This led to their ambivalent attitudes toward the introduction of population education programme in the schools. More specifically, more clarification and explanation about sex preference should be given to neutralize

the general feeling among all countries for sex preference, especially for boys.

Another very definite trend in the findings from the KAP studies was the existence of confusions and misconceptions about the definition of population education among the respondents. The majority equated population education with family planning and birth control. Countries need not only provide an intensive educational campaign to correct this misconception but they themselves should be clear and definite about their stance with regard to its definition and the programme boundaries.

The majority of the respondents also agreed that population education should be introduced into other subject areas rather than offering it as a separate course and that it should be introduced in high school and college. While the first finding has found acceptance as a feasible mode among countries and experts on the programme, there appears to be a need for basic minimum learning requirements to be developed to avoid overloading an already overcrowded curriculum. With regard to the second general finding, although most respondents felt that population education should be taken up in high school and college, other exigencies and circumstances force countries to introduce it in the elementary level. One good reason is that it is usually in the fourth or fifth grade when most students drop out of schools in most Asian countries. Therefore, before they reach the child-bearing age, it is important to acquaint them with population issues.

Lastly, the general trend among the findings was that the introduction of sex education and other controversial population issues were not as unacceptable to Asian countries as most people are led to believe. Many of the surveys showed that the respondents agreed to their inclusion in the population education lessons but that they should be included at high school and college levels.

B. Exemplary Studies

BANGLADESH

01

Ministry of Education and Religious Affairs (Education Division). Population Education Programme. *A study of knowledge and attitude towards population problems, issues and population education of different level of students.* Dhaka, 1980. 27 p.

OBJECTIVES

1. To assess the level of knowledge of the students of classes IV to XIV on population facts and related problems prior to their exposure to classroom teaching in population education.

2. To assess the attitude of the students of classes IV to XIV towards population issues and population education prior to their exposure to classroom teaching in population education.

METHODOLOGY

Samples: Stratified random sampling of 19 thanas was used, specifically one from each district of the country. Four primary schools, two high schools and one

college from each thana were selected. Three students from each class of the selected educational institutions were again randomly selected making a total of 1,196 respondents from all levels. The sample was further subdivided as groups of respondents from all levels. The sample was further subdivided as groups of respondents into those from classes IV and V; classes VI to VIII; classes IX and X and classes XI to XIV. Each group of respondents was administered by a slightly different set of questionnaires.

Data collection and analysis techniques: Questionnaire comprising a test of knowledge and test of attitude. Frequency distribution, percentage and mean scores computation were used to analyse the data.

FINDINGS

1. Students of higher classes had a higher knowledge base than those of the lower classes.

2. Within each class or group, there is still a substantial number of students whose levels of awareness should be raised substantially through an introduction of population education courses in the school.

3. There is a fairly favourable attitude of the students towards population education. However, the nature of the distribution of the test scores for each class or group indicated intra-class or intergroup variations, demonstrating the fact that in each group there were large numbers of students with less favourable attitude than that is represented by the mean score for the class.

4. The class or the group with a higher knowledge base tends to be more favourable towards the subject than that with a lower knowledge base. However, in class six, although the male students had higher knowledge base than the female students, their attitude was very slightly less favourable than that of the female students.

5. In the higher level of education (classes XI to XIV) the male students have higher knowledge base than the female students. But in each class in this level, the female students tend to have a slightly more favourable attitude.

DESCRIPTORS: *Student Attitudes; Primary School Students; Secondary School Students; Population Awareness; Bangladesh*

SOURCE: Executive Director
Population Education Programme
Ministry of Education and Religious Affairs (Education Division)
House No. 62, Road No. 7/A (New)
Dhanmondi R.A.
Dhaka-9, Bangladesh

BANGLADESH

02

Ministry of Education and Religious Affairs (Education Division). Population Education Programme. *A study of knowledge and attitudes towards population education and practice of family planning of teachers*. Dhaka, 1979. 82 p.

OBJECTIVES

1. To assess the knowledge

base of teachers on population facts and related problems prior to their exposure to the training programme and subsequent classroom teaching.

2. To assess the attitude of the teachers towards population issues and population education programme prior to their exposure to the training and subsequent classroom teaching.

3. To assess the opinions of the teachers regarding family size, ideal family size and also the extent of their adoption of family planning measures.

Sample: Nineteen thanas (Administrative units), one from each district of the country, were randomly selected; 261 teachers, 344 teachers and 184 teachers were randomly selected from the primary schools, secondary schools and colleges respectively.

Data collection and analysis technique: Questionnaire consisting of 50 items for the knowledge test, 42 items for the attitudes test and 13 items for opinions were administered by the 19 District Programme administrators of population education programme. Frequency distribution and percentages were used to analyse the data, also finding the means and the standard deviations.

FINDINGS

1. The mean scores of the three groups indicate that the knowledge base of primary school, secondary school and college teachers in the area of population problems and population education is generally low, specifically in demography, health and nutrition, environment, education, food and agriculture, socio-economy and population education.

2. All three groups of teachers have favourable attitudes towards population issues and population education, with the college teachers having a slightly more favourable attitude than the other two.

3. The attitude of each level of teachers has some conformity with their family size. The college teachers who have the smallest family size have a more favourable attitude towards population issues.

4. Teachers' actual family size, married life, their children's age and sex have some relationship to their expected, desired and ideal family size. College teachers expect to have more children than secondary or primary teachers. Statistics indicate that the number of live births amongst college teachers is less than that of secondary and primary teachers and that life expectancy of the children of secondary school teachers is less than that of a primary school teachers or a college teachers perhaps due to socio-economic and cultural factors.

5. Teachers at all levels are conscious about the severe consequences of rapid population growth in Bangladesh

6. While the three groups of teachers generally agreed with family planning the secondary teachers were the least enthusiastic.

7. An overwhelming majority of the teachers agreed that population education should be included in the formal education system with college

teachers taking the highest position followed by the primary and secondary school teachers respectively.

DESCRIPTORS: *KAP; Teacher Attitudes; Primary School Teachers; Secondary School Teachers; Family Size Norms; Bangladesh*

SOURCE: Executive Director
Population Education Programme
Ministry of Education and Religious Affairs
(Education Division)
House No. 62, Road No. 7/A (New)
Dhanmondi R.A.
Dhaka-9, Bangladesh

INDIA

03

Barasubramaniam, Narayan Das and others. *A study of the reactions of high school teachers to population education as integral part of the curriculum.* 1970. (Published in Journal of Family Welfare, Vol. 17, no. 2, December 1970).

OBJECTIVES

1. To find out the teachers' awareness of the population problem in India.

2. To find out their reaction to the inclusion of population education in the school curricula.

3. To find out whether teachers are in favour of teaching sex education along with population education.

METHODOLOGY

Sample: 105 school teachers drawn from a total of 357 teachers from 12 high schools located in Chembur - a northern suburb of greater Bombay - selected by a simple random sampling procedure.

Data collection analysis technique: Structured interview to collect institutional, bio-social and opinion data.

FINDINGS

1. A very high awareness of the population problem in India was found amongst teachers. The teachers replied that unemployment, low standard of living and food shortage were due to over population.

2. Most of the teachers were not aware of the efforts being made to introduce population education in the school curricula. They did not know about the national seminar on population education held at Bombay in August 1969.

3. Most of the teachers were of the opinion that population education should be introduced in the school curricula. The suggested contents are:

a) relationship between economic growth and population;

b) ways and means of finding solutions to the population problem; and

c) demographic trends of population growth.

However 30 per cent of the teachers who did not approve of the inclusion of population education

in the school curricula were of the opinion that immaturity of students at school level would act as a barrier to teaching the subject.

4. The majority of the teachers were of the opinion that sex education should be taught along with population education. They felt that it would help in removing wrong ideas and build up the moral character of students.

5. Whereas only 23 per cent of the teachers were of the opinion that population education should be taught as a separate subject, 49 per cent felt that it should be integrated with other subjects.

DESCRIPTORS: *Teacher Attitudes; Secondary School Teachers; Population Awareness; Curriculum Subjects; Sex Education; India.*

SOURCE: Head
Population Education Unit
National Council of Educational Research and Training
Sri Aurobindo Marg
New Delhi-110016, India

INDIA

04

Dayal, Shaibala. *A knowledge of school teachers about family planning and their reaction to population education curriculum.* New Delhi, Social Research Division, National Institute of Family Welfare, 1973. (Published in Journal of Family Welfare, Vol. 17, no. 3, March 1973).

OBJECTIVES

1. To seek information regarding teachers' knowledge, practice and approval of family planning.

2. To find out their reactions to the population education curriculum.

METHODOLOGY

Sample: 98 teachers (71 male and 27 female) B.Ed. correspondence course of Delhi University for the session 1970-71 formed the sample. Nearly 53 per cent of the sample were married.

Data collection and analysis techniques: Questionnaire consisting of 24 items.

FINDINGS

1. A majority of male as well as female teachers (90 per cent male and 75 per cent female) favoured a two to four years interval between two births.

2. About 75 per cent thought it desirable to use methods to prevent unwanted pregnancies.

3. All female married teachers approved the use of family planning methods only after one or two children.

4. While about 65 per cent wanted the concept of a small family and its advantages to be taught to the high school children only 24 per cent thought it necessary for students at the elementary level.

5. While about 55 per cent recommended the teaching of trends in population growth, birth and

migration be taught at the high school level, only 6 per cent thought it suitable for the elementary level and 17 per cent thought it suitable for the middle school level.

6. While 67.6 per cent recommended that Government policy and programme of population control be taught at the high school level, they did not want this topic to be taught at the elementary level.

7. While 50 per cent thought that physiology of human reproduction could be taught at the higher secondary level, none of the teachers wanted this to be taught at the primary level and only 7 per cent felt that the topic is suitable for the middle school level.

8. While 70 per cent recommended that population education should be integrated with social studies, 30 per cent wanted it to be integrated with biological sciences and 24 per cent favoured its integration with civics and economics.

DESCRIPTORS: *KAP; Teacher Attitudes; India*

SOURCE: Head
Population Education Unit
National Council of Educational Research and Training
Sri Aurobindo Marg
New Delhi-110016, India

INDIA

05

Maheswari, J.R. *A study of the receptiveness of school teachers to population education.* M.Ed. thesis, Jamia Islamia University, 1972. Unpublished.

OBJECTIVES

1. To study the extent of awareness of the population problem among school teachers.

2. To find the opinion of teachers towards the adoption of a small family norm.

3. To find the opinion of teachers towards the introduction of population education in schools.

4. To find out possible contents of population education to be included in the school curricula on the basis of their opinion.

5. To find out the opinion of teachers regarding the ways and means of introducing population education in schools.

METHODOLOGY

Sample: 300 teachers, (150 men, and 150 women) drawn from 28 government schools, (12 secondary schools and 16 elementary schools) of South Delhi.

Data collection and analysis techniques: Questionnaire.

FINDINGS

1. The teachers had very high awareness of the population problem faced by the country and the world.

2. About 92 per cent said that unemployment and poor standards of living were mainly due to overpopulation.

3. Eighty per cent agreed that a small family is advantageous; 40 per cent of them said that it enables the people to have higher standard

of living; 24 per cent said that it leads to a happy, comfortable life.

4. The majority preferred two sons and only one daughter.

5. The majority of teachers did not believe in the effectiveness of population education at school level. They felt that adults should be educated in the philosophy and practice of family planning.

6. About 70 per cent did not know of the efforts being made to introduce population education in schools.

7. The teachers were of the opinion that topics such as knowledge about family life, the characteristics, causes and trends of population growth, its impact on the economic and social development of the country, and also on the health and nutrition of people, should be included in a course on population education.

8. Eighty three per cent agreed that anatomy and physiology of human reproduction should form a part of population education. However, they were against introducing sex education in schools.

9. A majority of teachers favoured the idea of integrating population education concepts, with existing school subjects. They felt that most of the concepts could be integrated through social studies, sciences, languages and mathematics.

DESCRIPTORS: *Teacher Attitudes; Population Awareness; Curriculum Subjects; India.*

SOURCE: Head
Population Education Unit
National Council of Educational Research and Training
Sri Aurobindo Marg
New Delhi-110016, India

INDIA

06

Pohlman, Edward and K. Seshagiri Rao. *A study of the views of teachers on birth planning.* New Delhi, Central Institute of Family Planning, 1970.

OBJECTIVES

To find out teachers' perception of the different aspects of population problems.

METHODOLOGY

Sample: 832 male and female teachers from elementary and secondary schools in rural and urban areas of Delhi and Haryana State.

Data collection and analysis techniques: Questionnaire (672 teachers) and interview (160 teachers) on the inclusion of the following topics in the school curriculum: (a) Overpopulation in India; (b) Need for small families; (c) How the human child is conceived; and (d) Family planning methods.

FINDINGS

1. Teachers generally recognized that there is a serious population problem in India.

2. The majority of the teachers believed that mere family

planning propaganda would not solve the population problem and that the illiterate should be made to understand that one of the main causes of poverty is due to overpopulation.

3. There was a general agreement in both the interview and questionnaire data that the topics on 'Overpopulation' and 'Need for small families', should be introduced in the school curriculum, but they strongly disapproved of the inclusion of the topic on 'How a child is conceived'.

4. The teachers recommended that 'Overpopulation in India' and 'Need for small families' be taught from primary classes. 'How a child is conceived' and 'Family planning methods' should be taught at university.

5. The general reply of teachers was that population education should be divorced from sex education.

DESCRIPTORS: *Teacher Attitudes; Population Awareness; India*

SOURCE: Head
Population Education Unit
National Council of Educational Research and Training
Sri Aurobindo Marg
New Delhi-110016, India

INDIA

07

Rao, D. Gopal. *A study of the awareness of teachers on population problems and their reaction to the introduction of population education in schools.* New Delhi, Population Education Unit, National Council of Educational Research and Training, 1976.

OBJECTIVES

1. To find out the perception of awareness of teachers towards population problem.

2. To find out their reaction to the introduction of population education in schools.

3. To find out their opinion about the content and methodology of introducing population education.

METHODOLOGY

Sample: Random sample of 500 teachers drawn from 10 schools of Delhi.

Data collection and analysis technique: Questionnaire consisting of 23 items.

FINDINGS

1. The majority of the teachers had a good knowledge of the causes and consequences of overpopulation.

2. They ascribed unemployment, food shortage and poverty to overpopulation in the country.

3. They favoured the introduction of population education in schools.

4. Most of the teachers felt that it should be taught as an integral part of the school curriculum.

5. They recommended that it should be made compulsory in schools and an examination subject.

6. They also favoured the teaching of sex education in schools.

DESCRIPTORS: *Teacher Attitudes; Population Awareness; Introductory Approach; India*

SOURCE: Head
Population Education Unit
National Council of Educational Research and Training
Sri Aurobindo Marg
New Delhi-110016, India

INDIA

08

Salkar, Kalyan R. *A study of population awareness among school students in Goa (Standard VII to XI) as well as teachers and parents and their reactions to the inclusion of population education in the school curriculum.* Ph.D. dissertation, Bombay University, 1974. Unpublished.

OBJECTIVES

1. To assess the degree of population awareness among Goan school children, their teachers and parents.

2. To find out their preparedness for the inclusion of population education in the school programme.

3. To understand their views about the ways and means of introducing population education in the school system (Standards 7-11).

METHODOLOGY

Sample: 2,039 students, or 5 per cent of the student population from Standards 7 to 11 from 11 Talukas of Goa District; 400 middle school and secondary school teachers, or 15 per cent of the middle and secondary school teachers in Goa in 1970-71; 200 parents from different socio-economic strata covering all the 11 Talukas of Goa District.

Data collection and analysis technique: Separate questionnaires for students, teachers and parents. The students questionnaire consisted of 19 items; the teachers and parents questionnaires consisted of 11 items each.

FINDINGS

Students' reaction

1. A great majority were aware of the population problem of the country.

2. They were willing to learn more about population.

3. Nearly 50 per cent of them desired to learn it as incorporated with other subjects of the school curriculum.

Teachers' reaction

1. They were sufficiently aware of the population problem of the country as a whole.

2. They were in favour of introducing population education in the school curriculum.

3. They desired the integration of population education with major subjects of the school curricula.

4. They were in favour of teaching sex education along with population education.

5. They wanted population education to be taught by teachers themselves but with some training.

Parents' reaction

1. They felt that population education should be introduced in schools.

2. They thought it should be taught by teachers themselves rather than by outside experts. Some teachers of the school should be given specialized training so that they may teach the contents of population education effectively.

DESCRIPTORS: *Population Awareness; Student Attitudes; Secondary School Students; Teacher Attitudes; Secondary School Teachers; Parent Attitudes; Introductory Approach; India*

SOURCE: Head
Population Education Unit
National Council of Educational Research and Training
Sri Aurobindo Marg
New Delhi-110016, India

INDIA

09

Vaswani, N.V. and Indira Kapoor. *School teachers attitude towards population education.* Bombay, Family Welfare Training and Research Centre, 1977.

OBJECTIVES

1. To study the teachers attitude towards teaching of population education in schools.

2. To study their views about the teaching of population education as an integrated subject or a special subject in the school curriculum.

3. To find which subjects they thought most suitable for integrating population education.

4. To find out their attitude towards age of marriage and family size.

METHODOLOGY

Sample: 405 teachers from 10 schools in Khetwadi area, a crowded middle class locality in Bombay.

Data collection and analysis technique: Questionnaire.

FINDINGS

1. While 54.2 per cent teachers had heard about population education, only about 3 per cent could define it correctly.

2. When the meaning and scope of population education was made clear about 75 per cent felt that it should be introduced as a subject in the school curriculum.

3. Those not in favour of its introduction felt that the subject was difficult for the teachers to teach and for pupils to understand.

4. While 47.2 per cent felt that population education should be integrated with other school subjects, 8.7 per cent thought that it should be taught as a separate subject and 13.9 per cent did not express their opinion.

5. Nearly 49 per cent were of the opinion that it should be taught earlier than Standard 8 and only 26.6 per cent felt that it should be introduced at the college level.

6. Nearly 44 per cent preferred not to teach this subject as they were not qualified to do so.

DESCRIPTORS: *Teacher Attitudes; Introductory Approach; Curriculum Subjects; India*

SOURCE: Head
Population Education Unit
National Council of Educational Research and Training
Sri Aurobindo Marg
New Delhi-110016, India

NEPAL

10

Tribhuvan University. Curriculum Development Centre. *Knowledge and attitude survey on population education.* Kathmandu, 1982. 30 p.

OBJECTIVES

To determine the knowledge and attitude of both teachers and students of Tribhuvan University regarding population education.

METHODOLOGY

Sample: 150 students from all levels and 50 university teachers.

Data collection and analysis technique: One questionnaire with 7 items for students and one with 29 items for teachers. Frequency distribution and percentage were used to analyse the gathered data.

FINDINGS

Survey on the teacher:

1. The majority of the teachers were aware of the present population phenomenon.

2. There were some mixed feelings and misconceptions. Most respondents felt that a big family is not a blessing, but a large number indicated that children are economic assets and an insurance for old age. The value of the male child is still predominant and many believe that family planning is a hindrance to sexual pleasure. The majority also believed that family planning is intended not only for those who would like to space and limit their children but also for those who would like to have children. Most agreed that big families add to social problems but strongly disagreed with the statement that a person having more children than can be adequately cared for is morally irresponsible. The majority believed that rapid population growth in Nepal is the major cause of poverty. Very few wanted the Government to take direct measures and very few agreed that controlled population growth is essential for the economic development of the country.

3. The majority stated that the ideal family size should be two children, whether boys or girls.

4. The majority felt that education is the best contraceptive but only very few indicated that population education is a popular subject and a large number remained undecided.

5. The majority were in favour of integration of population education concepts into the existing curricula rather than adopting a separate curriculum at the higher education level.

6. Half of the respondents agreed that the main objective of population education is to promote responsible parenthood but a large number thought that population education is the same as family planning. Many also agreed that a course on population education should include sex education and family planning.

Survey on students:

1. The students were generally aware of the population phenomenon. They tended to have stronger feelings than teachers about controlling population growth by direct measures.

2. They disagreed with more pro-natalist beliefs than the teachers did and showed very favourable attitudes towards family planning.

3. The majority of the students perceived the two-child family as ideal. A higher proportion of students than teachers strongly agreed that controlled population growth is essential for the economic development of the country.

4. In contrast with teachers; the students found population education a popular subject and favoured its integration into existing curricula in higher education. They agreed with the teachers that the objective of population education is to promote responsible parenthood but that it is also the same as family planning. They also recommended that sex education and family planning be included in the population education course.

DESCRIPTORS: *Teacher Attitudes; Student Attitudes; Population Awareness; Nepal*

SOURCE: Curriculum Development Centre
Tribhuvan University
Tripureswar
Kathmandu, Nepal

PHILIPPINES

11

Ministry of Education, Culture and Sports. Population Education Program. *Reactions of parents and teachers to potentially controversial topics in population education.* Manila, 1973. 15 p.

OBJECTIVES

1. To determine reactions of parents and teachers to certain controversial content of population education.

2. To determine specific groups of parents and teachers who register opposition.

3. To determine specific areas of controversy in population education teaching guides.

4. To find out the reasons behind the objections to specific controversial population education content.

5. To solicit suggestions on the appropriate age/grade/year level, when to introduce and how to teach the controversial topics.

METHODOLOGY

Sample: Two representative provinces and one city from each of the 12 Regional Divisions. The total sample of 6,644 respondents (1,658 males, 4,986 females) is broken down into 2,093 parents (570 males, 1,623 females); 2,441 elementary school teachers (420 males, 2,021 females); and 2,110 secondary school teachers - barrio high school teachers included - (668 males and 1,442 females). Most of the sample teachers are also parents of school children. The different subjects are residents of cities, towns and barrios and they represent various age groups, socio-economic status, and educational background.

Data collection and analysis technique: 312 forum assemblies, consisting of 15 to 25 respondents, attended separately by each group. Interview and study discussions using an open-ended questionnaire.

FINDINGS

1. The majority of the parents favoured the inclusion of the controversial topics in the school curricula. Out of 2,093 parents, 1,882 or 89.92 per cent favoured naming sex terms and/or showing pictures and illustrations of the sex organs; 1,869 or 89.30 per cent favoured naming and showing the different contraceptive devices; 1,953 or 93.31 per cent favoured the inclusion of the controversial topics related to the family size norm and 1,484 or 70.90 per cent favoured promoting death.

2. Similarly, 83 per cent of the elementary school teachers wanted the controversial topics included in the school curricula.

3. An even higher percentage of secondary school teachers also wanted the controversial topics included in the school curricula.

4. Only a small number of respondents reacted unfavourably to the inclusion of the controversial topics in the school curricula. Out of the total subjects (6,644) 179 or 2.69 per cent objected to the inclusion of the controversial topic related to family size norm; 381 or 5.73 per cent objected to the topic related to sex; 445 or 6.69 per cent objected to family planning; and 1,228 or 18.48 per cent objected to the promotion of death.

5. In the order of their frequency, the reasons given for the objections are as follows:

a) Controversial topic related to sex: (1) School children are too young to see, know and mention the sex organs and the reproductive process (44.03%); (2) Sex is ugly and obscene (24.84%); (3) School children may become immoral and indulge in sex activities at an early age (16.57%); (4) School children may get married at an early age (8.59%); (5) It is unnecessary to teach sex education to children, since they already know about it (4.24%); (6) Other reasons (1.74%).

b) Controversial topic

related to family planning (1) School children are too young to know the different contraceptive devices and their uses (44.92%); (2) School children may become immoral with the use of contraceptive devices (27.72%); (3) The church is against the use of contraceptive devices (15.35%); (4) School children may get married at an early age (6.59%); (5) The use of contraceptive devices had harmful effects (3.34%); (6) Other reasons (2.09%).

c) Controversial topic related to family size norm (1) More children make a happy family and provide more helping hands (40.33%); (2) It is sinful to limit the number of children (26.00%); (3) Children provide security for parents in their old age (16.89%); (4) Family size should be determined by the parents' ability to bring up the number of their children (9.04%); (5) God will provide (5.29%); (6) Other reasons (2.45%).

d) Controversial topic related to promoting death (1) It is a sin to promote death through infanticide and abortion (43.60%); (2) It is an immoral and unlawful act (27.34%); (3) It is very risky on the life of the mother (15.84%); (4) School children are too young to understand and get interested in talking about death (7.55%); (5) Promoting death through calamities brings about a lot of suffering and sacrifices (2.49%); (6) Other reasons (2.88%).

6. About one half of the elementary school teachers and one third of the parents and secondary school teachers suggested that the topics related to sex be taught starting in grade I. Most of the parents suggested introducing the topics on contraceptives (family planning), family size norm and promoting death in the first year of high school.

On the other hand, the elementary school teachers suggested that family planning be introduced in the fourth year of high school and family size norm and promoting death in grades V and VI, respectively.

7. Parents and teachers held similar views as to the grade level at which the controversial topics should be introduced. Most of the respondents agreed that the introduction of the topics related to sex could begin in grade I, while family planning and family size norm could be introduced in the first year (High School).

City and town dwellers also wanted the promotion of death to be introduced in the first year, but barrio residents preferred it to be introduced earlier in grade VI.

8. Parents, elementary school teachers and secondary school teachers residing in different localities (city, town, barrio) gave the same suggestions - grade I for introducing the topic related to sex and in the first year for the other controversial topics.

9. In the order of their frequency, the total samples suggested that the controversial topics be taught by integration, as separate courses, by the unit method, and as a 'mini' course.

DESCRIPTORS: *Parent Attitudes; Teacher Attitudes; Curriculum Content; Sex Education; Philippines*

SOURCE: Chief
Population Education
Program
Ministry of Education,
Culture and Sports
Arroceros Street
Manila
Philippines

PHILIPPINES

12

West Visayas State College. Population Center for Training and Research. *Assessment of secondary school teachers' and students' knowledge of and attitudes toward population education; abstract.* Iloilo, /1978/. 9 p.

OBJECTIVES

To determine the level of knowledge of population concepts, facts on topics of secondary school teachers and students in Western Visayas and their attitude toward population education.

METHODOLOGY

Sample: Randomly selected secondary school teachers and students in Western Visayas from Barangay schools, provincial schools, city schools and private schools.

Data collection and analysis technique: Questionnaire.

FINDINGS

1. Secondary school teachers and students in all types of schools had adequate knowledge of population concepts, facts on topics.

2. Both groups had adequate knowledge in the four areas of population education. The teachers had a higher level of knowledge than the students in all the four areas and were very adequate in the area of 'Planing for the Future'. Both groups obtained their lowest mean scores in demography.

3. Teachers and students of Barangay, Provincial and Vocational Schools had adequate knowledge of 'Planning for the Future'.

4. Students and teachers had inadequate knowledge of demographic concepts of population 'doubling time', 'projection', 'dependency rates' and 'migration and migration rates'.

5. Secondary school teachers and students had generally agreeable-indifferent (ambivalent) attitude toward population education.

6. Although there was no strong reaction noted in the respondents' attitude against population education, discrepancies or inconsistencies were noted in the attitude expressed by the two major groups of respondents in the same schools and among the different types of schools to some of the items in the checklist.

7. There was strong agreement among all respondents to the inclusion of population education in the curriculum to provide them with opportunities to help solve population problems.

8. Almost one-half or 23 of the items in the checklist were marked as Indifferent, indicating that these concepts, facts or topics need to be strengthened to enable teachers and students to make a more definite stand and acquire a more positive attitude toward them.

9. The findings indicate that the development and internalization of the following basic population concepts, facts or topics is inadequate: (a) Importance of population education especially in the secondary schools; (b) The relationship of population education and religion; (c) Population growth rate and how it is determined; (d) Consequences of rapid growth; (e) Value of children; (f) Decision making regarding family size; (g) Family planning methods; (h) Myths and fallacies in controlling family size; (i) Agencies that provide information on family planning; (j) Rationale behind teaching human sexuality and reproduction early in life; (k) Government policies and programmes on population education; (l) "Push and pull" factors on migration; (m) Demographic processes that affect RPG; (n) Socio-cultural barriers to population control; (o) Demographic transition; and (p) Communications approaches in family planning.

DESCRIPTORS: *Teacher Attitudes; Secondary School Teachers; Student Attitudes; Secondary School Students; Population Awareness; Philippines*

SOURCE: Population Center for Training and Research
West Visayas State College
Iloilo City
Philippines

REPUBLIC OF KOREA

13

Korean Educational Development Institute. *A survey on population consciousness of students and teachers in the elementary and secondary schools.* Seoul, 1977. 81 p. (KEDI research report no. 46)

OBJECTIVES

1. To identify the knowledge and attitudes of students and teachers at all school levels about population problems and events.

2. To identify knowledge and attitudes, with regard to the relationship between the environmental variables and the effects of population education.

METHODOLOGY

Sample: 5,273 students and 326 teachers from 27 schools nationwide.

Data collection and analysis technique: Questionnaires divided into Type A (for primary school students), Type B (for middle school students), Type C (for high school students) and Type D (for teachers). Analysis of the gathered data made use of percentile, average and standard deviation computation, applying Chi-square and variance analysis to determine the significance of variations.

FINDINGS

1. The knowledge of social problems caused by population increase was higher among teachers at the higher school level and much higher than that of the students.

2. The knowledge about environmental problems caused by the disequilibrium of ecosystem was quite low, marked by 13.2 points for students and 28.9 points for teachers as against the full score of 40.

3. The students were in

general, well aware of the population problems but they lacked understanding of their policy dimensions and how they affect economic development.

4. Both the students and teachers opted for the nuclear or small sized family, viewing a large-sized family as having negative effects on the family members. The idea of 'living apart from offspring as far as the economic situation permits was dominant both in the students and teachers groups.

5. The knowledge on the effects of population growth to health problems was higher among students than teachers.

6. Students became more decisive about whether to marry or not as they advanced to higher school levels.

7. Ninety-four per cent expressed desire to have children and 84.7 per cent of these respondents opted for a smaller number of children irrespective of their sex.

8. The majority of the respondents did not feel strongly about urban migration.

DESCRIPTORS: *Student Attitudes; Teacher Attitudes; Population Awareness; Korea, Rep. of*

SOURCE: Chief
Population Education Project
Korean Educational Development Institute
20-1 Umyeon-Dong, Gangnam-Gu
Seoul 135-00
Republic of Korea

REPUBLIC OF KOREA

14

Lee, Kyung Sik. *Relationships between specialization and attitudes toward population-related issues among professional students in Korea.* Seoul, Korean Institute for Family Planning, 1975. /52 p./. (Reprinted from: Journal of Family Planning Studies, Vol. 2, June 1975.)

OBJECTIVES

1. To examine the possible relationships of different types of professional training to attitudes and beliefs toward family planning, abortion, population education and equality of sexes.

2. To examine the possible relationships of desired family size to the size of the family in which they had been raised, the concepts of small, large and ideal family size and their professional background.

3. To determine whether students in health professions in general are more likely to show positive attitudes toward family planning, abortion and population education than students in the teaching profession.

4. To determine whether students in the teaching profession value larger families more than students in the health profession.

METHODOLOGY

Sample: All of the students enrolled in the Teacher's College, the College of Medicine and the Department of Nursing. One thousand six hundred and ninety two or 70

per cent of the total target student population participated. The proportion of respondents from the different professional groups was 50 per cent, 90 per cent and 80 per cent from education, nursing and medicine respectively.

Data collection and analysis technique: A 46-item questionnaire administered by six nursing instructors and a group of education students. Absolute and relative frequencies were computed for dependent variables of fertility values, beliefs in family planning and population-related issues. Chi-square tests were performed at the alpha level of .05 to compare the differences in categories of independent variable to each dependent variable. One-way analysis of variance was used for each attitude variable, the mean scale values and standard deviations.

FINDINGS

1. The majority of the students in professional schools of education, nursing, and medicine definitely favoured family planning and future contraceptive use. Students in the health professions were more likely (at a statistically significant level) to be in favour of family planning and use of contraceptives than the students in the teaching profession. The sex of the respondents was found to be a significant source of professional difference in attitudes toward family planning.

2. Health professionals, in general, had more positive attitudes toward abortion than did students in the teaching profession. The sex factor slightly obscured the relationships of the general differences of professions, but the strength of professional difference was sufficient to overcome the sex factor. A slight positive relationship was observed between class level in school and mean scale values of student's responses on abortion.

3. The majority of respondents, regardless of professional background, believed population education was a better approach to 'help solve population problems'. They were also in favour of the school system as the educational channel for sex and family life education.

4. The nursing group had a more positive attitude toward the quality of sexes than the other two groups. The female students favoured 'enlightened marriage' and 'keeping up with society' while the male students favoured 'economic reason' as important reasons for married women taking up careers. The male education students favoured 'economic reason' while the male medical students favoured the 'woman's right for a career' as the reason for continuing the married women's career. No professional difference was observed among female students.

5. The higher proportion of the education group desired three children.

6. More female students desired a smaller family (the two-child family) while more male students desired three children. The male medical group desired a two-child family more than did the male education group. The female groups of health professions appeared in actual proportions although the difference was not statistically significant.

7. The position of birth order among siblings of the respondents significantly affected their fertility values. Specifically, the 'eldest daughter' group desired the two-child family more whereas the 'eldest son' group valued the three-child family more.

8. No apparent relationship was found between the desired fertility value and the actual number of siblings to which the students had been exposed.

9. Students from the large metropolitan cities of more than one million population were found to desire a small family (the two-child family) more often than those from the communities of less than one million population in their high school days.

10. Students who approved married women's careers were found to desire smaller families than those who disapproved.

11. Health professionals in general had more favourable attitudes toward family planning and population-related issues than the teaching professionals. Consequently, the health professionals desired fewer children than the teaching professionals. Since the findings of this study indicated rather consistent differences in attitudes across the three professional groups studied, it would appear very important that a further study be designed which would allow an examination of the causal mechanisms which are affecting these observed differences.

DESCRIPTORS: *Student Attitudes; University Students; Family Size Norms; Family Planning Education; Korea, Rep. of*

SOURCE: Korean Institute for Population and Health
115 Nokbun-Dong, Empyung-ku
Seould 122
Republic of Korea

REPUBLIC OF KOREA

15

National Family Planning Center. *Knowledge, attitude and behaviour of middle and high school teachers with regard to population and family planning education*, by Tae Ryong Kim and Kyoung Sik Cho. Seoul, 1970. 104 p. In Korean and English.

OBJECTIVES

To determine:

1. The behaviour of the Middle and High School teachers with regard to population, family planning and family life education.

2. How well the teachers are prepared to teach population education, family life and family planning education.

3. The basic role of a school teacher as the adviser to students on matters related to sex life, marriage and population awareness.

4. The advantages and limitations of the teacher's position in orienting himself in matters relating to population and family planning.

5. The school programmes teachers are already conducting in the field of population and family

planning education and other programmes they would like to conduct.

6. The teachers' present needs in terms of teaching materials, training, administrative support, and financial assistance.

METHODOLOGY

Sample: Seventy-five schools were randomly selected out of 2,324 Middle and High Schools in the Republic of Korea. These schools had 45,623 teachers, out of which 2,544 teachers working in 75 schools were selected for the purpose.

Data collection and analysis technique: Questionnaire with 55 structured response questions in 7 pages, distributed for self-administration. Mean, frequency and percentage counts and descriptive group comparisons were used to analyse the data.

FINDINGS

1. Teachers were not well prepared to teach population, family planning, or related topics. More than half of the teachers apparently had no opportunity to learn about these subjects in their own schooling and more than four-fifths had no chance to learn about the subject of population in special meetings or seminars outside of their own formal education. Furthermore, more than 7 in every 10 teachers believed that they would profit from special seminars on population education.

2. Teaching behaviour in regard to population and family planning topics was much influenced by learning experience in the past. Male teachers, married teachers, older teachers having more children and social studies teachers tended to deal with this topic in classes more frequently than other teachers. The fact that those who reported an experience of learning about population either in their schooling or through special opportunities actually brought the subject into class, and they were much more likely than teachers without past training to discuss it, frequently points to the need for providing more opportunities for all teachers to learn.

3. Three-fourths of the teachers believed that there should be more materials on population in the curriculum. More than four out of five teachers stated that family planning should be included in the curriculum.

4. The majority view (65 per cent) was that family planning should be handled at an advanced or high school level, while another 18 per cent think it could be begun in middle school or taught at all levels. One quarter of teachers felt that family planning content should include specific family planning methods, but the majority (59 per cent) favoured instruction as to general concepts of family planning only. Also, they felt that family planning should be handled primarily in health, biology, and social studies classes.

5. More than 8 out of 10 teachers felt that population growth in Korea is too rapid.

6. Nearly nine in every ten teachers stated that induced abortion should be legalized at least on a conditional basis. Male teachers supported unconditional liberalization more frequently than

female. The teachers' own experiences with contraception as well as with induced abortion influenced the frequency of opinions expressed in support of liberalizing abortion laws.

7. Teachers felt that men should marry at an average age of 27.4 and women at 23.6. Female teachers favoured somewhat older ages at marriage for both sexes than male teachers. More than half (51 per cent) of teachers favoured a nuclear family. A little less than half (44 per cent) favoured free choice in mate selection; 49 per cent preferred help from parents or an intermediary.

DESCRIPTORS: *Teacher Attitudes; Secondary School Teachers; Curriculum Subjects; Family Planning Education; Korea, Rep. of*

SOURCE: National Family Planning Center
Seoul, Republic of Korea

REPUBLIC OF KOREA

16

Seoul National University. Education Research Institute. *A survey on the secondary school teachers' knowledge and attitudes toward population problems; a project report*, by Young Horn Park and others. Seoul, 1975. 61 p.

OBJECTIVES

1. To measure teachers' awareness of population problems such as the population phenomena, the consequences of population increase and the need for population education.

2. Specifically, to explore:

a) How the secondary school teachers perceive the seriousness of current population problem.

b) What their attitudes are toward population problems, population control, and population education.

c) Whether they know enough about major facts, concepts, principles, and theories of population matters.

d) What their opinions are about the current practices of population education.

METHODOLOGY

Sample: 2,062 secondary school teachers representing 3 per cent of the total teacher population. The whole country was regionally stratified into metropolitan areas, industrial cities, general cities, town rural areas. Within each stratification, schools as a cluster sampling unit were randomly and proportionally selected according to the size of teacher population in each stratum. Two hundred and thirty schools and three teachers from each grade level were selected.

Data collection and analysis technique: Questionnaire containing 20 items on awareness of population problems and 48 questions on the measurement of teacher's attitudes in the form of Likert-type items in which each person was required to select one of the five options indicating different levels of agreement-disagreement on a continuum. Techniques for analysis used include chi-square values, contingency coefficients, frequencies and percentages.

FINDINGS

1. High school teachers as a whole were highly aware of the importance and seriousness of the population problems. Catholic teachers, especially those teaching natural sciences and arts; rural teachers; and older teachers showed a relatively low level of awareness.

2. Secondary school teachers' attitudes toward population problems were positive, particularly with respect to family planning and population control. They were cognizant of the need for population education. There were fewer positive attitudes with Confucian or Catholic teachers; the teachers in natural sciences or arts; and older teachers.

3. Secondary school teachers' knowledge of population problems are substantially lower than generally expected, and showed remarkable deficiency and misconceptions about demographic concepts. The teachers of social sciences tended to show more correct answers than any others, and the physical education teachers were relatively well versed in birth control techniques and human physiology.

4. Sampled teachers generally indicated their dissatisfaction with the inservice training they received and their teaching experiences at school. They knew that their knowledge of population problems, mostly obtained from unreliable sources and in an unsystematic way, was generally inadequate to meet educational needs at school. They also pointed out that the textbooks used in the present high school are insufficient and inadequate as far as the content of population education is concerned.

DESCRIPTORS: *Teacher Attitudes; Secondary School Teachers; Population Awareness; Korea, Rep. of*

SOURCE: Education Research Institute
College of Education
Seoul National University
Kwanak Ku
Seoul,151
Republic of Korea

THAILAND

17

Chaiwat Panjaphongse. *Knowledge, attitudes and beliefs about population education of teachers in Thailand; a comparison of secondary school teachers, teachers in training and instructors in teacher training institutions.* Ph.D. dissertation, University of North Carolina at Chapel Hill, 1974. 293 p.

OBJECTIVES

1. To compare the knowledge, attitudes and beliefs about population education held by secondary school teachers, instructors in teacher colleges and colleges of education and teacher trainers.

2. Specifically, the study sought to determine the following:

a) knowledge pertaining to the elementary facts of population matters in Thailand; the National Population Policy; methods of family planning; sources of information; and family planning service centres in Thailand;

b) attitudes toward population control, adopting population

education in the schools, participating in population education activities, family planning in Thailand, teaching related matters especially family planning.

c) beliefs on population and population-related concepts.

METHODOLOGY

Sample: The respondents were selected by random stratified sampling by area and by school or colleges in each area. The sample consisted of 3,149 teachers broken down into 1,228 secondary school teachers, 682 instructors and 1,239 teachers in training.

Data collection and analysis technique: Separate questionnaires were administered to secondary teachers, instructors in teacher colleges and colleges of Education and teachers in teacher training colleges. Methods of analysing the data gathered include relative frequencies in per cent, one-way analysis of variance and three-way analysis of variance with non-orthogonal design and Scheffe Method to test for possible comparison between means for each main effects.

FINDINGS

Knowledge

1. The knowledge of the basic facts of population matters in Thailand among all groups of teachers was very poor and tended to vary by regions and sex.

2. Although more than half of teachers in each group knew that Thailand already has the National Population Policy, the proportion of teachers in each group who knew the correct approximate period for adopting this policy was low.

3. Most knew about the ovulation period for women in the reproductive age and the condom for men as contraceptive methods. Among secondary school teachers and teachers in training, sterilization was the most well-known method of family planning while the condom was the best known by instructors. Jelly or foam was the least known method for these teachers.

4. Magazines, newspaper, and friends were the most common sources of family planning information, and the hospital was the most known family planning service centre.

5. Male teachers had significantly more knowledge about the basic facts of population matters in Thailand than female teachers.

Attitudes

1. These three groups of teachers tended to have positive attitudes toward (a) limiting population growth in Thailand; (b) adopting population education in the schools; (c) participating in population education activities; (d) family planning in Thailand; (e) participating in family planning programme; and (f) teaching related matters of family planning in the schools.

2. It was also found that the attitude of these three groups of teachers toward participating in family planning programmes tended to be varied by regions and sex.

3. Female teachers had significantly more positive attitudes towards limiting population growth

in Thailand than male teachers.

Beliefs

1. These teachers believed that the age at first marriage of a Thai girl should be between 21 and 25 years, and for a Thai boy between 26 and 30 years.

2. There was a positive relation between the belief about the ideal number of children and the income level of a Thai family. In general, these three groups of teachers believed that a Thai family with an income less than 1,000 Baht should have 1 to 2 children. If the family had an income between 1,000-3,000 Baht they should have 1 to 3 children, and if the family had an income higher than 3,000 Baht they should have 3 children or more.

3. The majority of teachers in each group felt that the present size of the population in Thailand was optimum but the rate of population growth of the nation was too fast. Most of these teachers believed that increasing the Thai population would lead to serious problems for the nation related to social and economic development.

4. Most of these three groups of teachers believed that population education should be introduced into both the school curriculum and adult education with equal weight. The largest proportion of secondary school teachers and instructors believed that it should be provided through educational school curriculum for the various levels of education while the largest proportion of teachers in training believed that it should be provided through mass communication channels such as newspaper, radio, and television. The level of education at which they believed population education should be started varied from one group of teachers to another ranging from lower elementary level to lower secondary level. If it were taught at primary level and secondary level they believed that population education should be arranged by integrating it into some existing subjects. For the college or university level it should be established as a new subject.

DESCRIPTORS: *Teacher Attitudes; Secondary School Teachers; Trainers; Population Awareness; Family Planning Education; Thailand*

SOURCE: Xerox University Microfilms
300 North Zeeb Road
Ann Arbor, Michigan 48106
U.S.A.

THAILAND

18

Chaiwat Panjaphongse. *Knowledge, attitudes and beliefs of elementary school teachers about population education.* Bangkok, Population Education Project, Department of Education, Mahidol University, 1975. 37 p. (Research report paper no. 3)

OBJECTIVES

1. To determine the feasibility of introducing population education into schools; to describe the baseline against which the future effects of population education activities may be compared and to determine the most appropriate nature of population education activities.

2. To help plan a comprehensive population education programme in the formal school system and stimulate students, teachers and other educators to think about population problems and the importance of introducing a population programme in the country.

METHODOLOGY

Sample: A multi-stage sampling technique was used: provinces, elementary schools and elementary school teachers served respectively as primary, secondary and the ultimate sampling units. The study involved 16 provinces from four geographical regions, with 63 elementary schools and 1,083 elementary school teachers.

Data collection and analysis technique: Questionnaire administered by project staff. Data collected were analysed by percentage count, mean mode and descriptive group comparisons.

FINDINGS

1. A substantial proportion of elementary school teachers had a rather low level of knowledge concerning the rate of natural population increase, the approximate size of Thailand's population and the government policies.

2. More than half of the respondents were in favour of family planning and the use of contraceptive methods.

3. A large majority (87.8 per cent) felt that the Government should make use of population education to help lower population growth. In addition, 80 per cent said that the Ministry of Education should be involved in the national population programme.

4. Population education should be expected to gain wider support in the secondary school.

5. Integrating population education into existing curricula rather than setting up a new course was seen as the best approach to its introduction.

6. Social studies appeared to be the most acceptable place for its introduction but health education and science were also favoured.

7. The teachers were found to be co-operative with regard to population education activities.

DESCRIPTORS: *Teacher Attitudes; Primary School Teachers; Population Awareness; Thailand*

SOURCE: Director
Population Education Project
Faculty of Social Science and Humanities
Mahidol University
25/25 Moo 5
Tambon Salaya, Amphor Nakhon Chaisri
Nakhon Pathom 73170
Thailand

THAILAND

19

Chaiwat Panjaphongse. *Knowledge, attitudes and beliefs of secondary school students about population education and family planning.* Bangkok, Population Education Project, Department of Education, Mahidol University, 1974. 48 p. (Research report paper no. 1)

OBJECTIVES

1. To determine the feasibility of introducing population education in the schools; to describe the baseline against which future effects of population education activities may be compared, and to determine the most appropriate nature of population education activities.

2. To help plan a comprehensive programme of population education in the formal school system and to stimulate students and teachers to think about population problems and the possibilities of introducing a population programme in the country.

METHODOLOGY

Sample: Students of secondary schools in 20 provinces of the country randomly selected. The Bangkok Metropolis was excluded. Within each province, all government schools which include M.S. 5 in the academic stream and M.S. 6 in the vocational stream (i.e. terminal grades of the secondary programmes) were selected. There were 65 such schools. One class of the terminal grade was randomly selected from each school. All students who were present on the day the researcher came were included in the sample. Two thousand and eighty five students were thus sampled.

Data collection and analysis technique: Questionnaires administered directly to all the students by class. Students were allowed one hour to complete.

FINDINGS

1. Most students believe that Thailand faces a serious population problem, but they also favour smaller families for themselves and others, and would encourage both use of family planning and education about family planning in school programmes.

2. Female students' views tended to be somewhat more anti-natalist than those of male students. The same was true for academic as compared with vocational students.

3. Despite their educationally-elite status, the students tended to come from large families (median 6.4 children).

4. Although there was clearly an association between the number of one's siblings and desired number of children, there was nevertheless a very important distinction between the two: the median desired number of children was 2.4, or four children less than the family of orientation. Somehow, through a process as yet unknown, these young people have already undergone a major transformation in what they consider their most desirable family size.

5. The associations among the variables were nearly all positive, suggesting that these variables may only be different expressions of a single factor. Therefore, although no casual relationships were proved, sufficient evidence exists to support the belief that there should be a working hypothesis for educational programmes until alternative evidence can be obtained.

6. The content of population education curriculum should focus both on family planning and on an understanding of the macro-level population situation.

DESCRIPTORS: *Student Attitudes; Secondary School Students; Family Planning Education; Thailand*

SOURCE: Director
Population Education Project
Faculty of Social Science
and Humanities
Mahidol University
25/25 Moo 5
Tambon Salaya, Amphor
Nakhon Chaisri
Nakhon Pathom 73170
Thailand

THAILAND

20

Somkid Isarawatana. *The integration of population education in lower secondary social studies curriculum.* M.Ed. thesis, Chulalongkorn University, 1974. 265 p. Unpublished. In Thai with English abstract.

OBJECTIVES

To study the scope and subject matter of population education from documents, both in Thailand and abroad, collect data concerning social studies teachers' and educators' opinions, as well as the interests of students so that these data could be used as a guideline for integration of population education into Lower Secondary Social Studies Curriculum.

METHODOLOGY

Sample: Three hundred and fifty persons were used as the sample - 150 lower secondary social studies teachers, 50 educators, and 150 students in the lower secondary school.

Data collection and analysis technique: Questionnaires.

FINDINGS

1. The teachers and educators were highly interested in integrating population education in the social studies curriculum.

2. The students were only moderately interested in the seven units of population education subject matter presented to them.

3. Basic population concepts should be integrated in geography in M.S. 1-3 (grades VIII-X)

4. Effects of population situation, especially in local population changes, should be added in civics but issues concerning national population changes and impacts of rapid population growth on economy, education, society, health, politics, should be integrated into geography in M.S. 1-3, as well as civics at the level to be specified by the teachers.

5. Issues related to local population changes should be integrated into geography and civics. Social, health, political, migration problems should be merged with civics only.

6. At the micro-level, the impact of population changes on the lives of the learners and the important decisions and adjustments which the learners will have to make should be emphasized in civics. Some units, such as the adjustment of the learners to moral problems related to culture and to living in the crowded community mught be integrated in morals.

DESCRIPTORS: *Teacher Attitudes; Secondary School Teachers; Student Attitudes; Secondary School Students; Curriculum Content; Secondary School Curriculum; Thailand*

SOURCE: Department of Secondary Education
Faculty of Education
Chulalongkorn University
Bangkok
Thailand

THAILAND

21

Wilawan Charanyananda. *The relationships of attitudes toward population education, quality-of-life beliefs and professional commitments of Thai home economics teacher educators.* Singapore, Institute of Southeast Asian Studies, Southeast Asia Population Research Awards Programme, 1980. 115 p. (SEAPRAP research report no. 54)

OBJECTIVES

1. To examine the relationships that exist among quality-of-life beliefs, attitudes toward population education and professional commitments to population education of Thai home economics teacher educators.

2. To determine the effects of selective demographic variables such as population education/family planning experience in workshops or seminars, family size, specialized years of teaching and age on each of the three major variables.

METHODOLOGY

Sample: Thai home economics teacher educators from seven of the 36 teachers' colleges, totalling 72 teachers.

Data collection and analysis technique: Questionnaire with respondents given one week to complete. To analyse the data, three measures were used: (a) the Researcher's Attitudes Toward Population Education Scale (ATT); (b) Wallace's Quality-of-Life Beliefs Scale (QLB); and (c) the Professional Commitment Scale (PC). Likert Attitude Scale Analysis Main Programme was employed to calculate the ATT and QLB scores. Frequency Analysis of Multiple Choices, Pearson Product Moment correlation Co-efficient and Analysis of Variance were all used to analyse various sets of data.

FINDINGS

1. Teacher educators who had more positive attitudes tended to have more positive quality-of-life beliefs and higher professional commitments.

2. Workshops/seminars on population-education/family-planning that those teacher educators attended in the past for the purpose of integration of population education into existing home economics curricula were not effective in changing their beliefs, attitudes, and commitments to population education. Thai teacher educators who had more workshop experience did not seem to have more positive attitudes, more positive quality-of-life beliefs, or higher professional commitments, than those who had less workshop experi-

ence. Those groups with less seminar experience appeared to have more positive attitudes toward population education, especially more positive attitudes toward population. Two reasons are offered for the weakness of these training programmes: (a) there is no long-range plan specifically for the home economics teacher educators in the Teacher Training Department; (2) the backgrounds of the participants are not similar enough, in terms of subject matter and role, to create a positive learning environment. Therefore, the seminar cannot be presented in enough depth to cause the desired changes in beliefs, attitudes, and commitments of those teacher educators.

3. Teacher educators whose major interests were in the food and nutrition area had more positive quality-of-life beliefs than all others. However, those teacher educators who had their major interests in the child development and family relations had the lowest quality-of-life beliefs of all. Those in all other areas of interests did not differ in beliefs, attitudes, or commitments concerning population education. This may be because: (a) the food and nutrition area has been the strongest, oldest, best-established programme in Thailand, while the child development area is relatively new to their interests; (b) there are many specialized institutions and programmes to train nutrition teacher educators with supported research, but none specifically to train home economists in the child development area; and (c) the real situation in Thailand - the deficiency of food and nutrition evidence, especially in the rural area - has been known and support of various organizations requested for quite a period of time.

4. Age, family size, and years of teaching had no influence on those teacher educators' attitudes toward population education, quality-of-life beliefs, and professional commitments. This may be due to the fact that all teacher educators in home economics were already concerned about quality of life. In addition, almost all had small families by Thai standards, that is, 75 per cent (n = 48) had none or two children, 12 (18.75 per cent) had three children, and only four (6.25 per cent) had four children. Besides, their socio-economic status, including environmental and psychological aspects, may make it possible for them to afford such families while maintaining a good, personal quality of life. Another explanatory factor may be that most of these respondents were relatively young women who may not have reached their completed family size.

DESCRIPTORS: *Teacher Attitudes; University Teachers; Home Economics Teacher Educators; Quality of Life; Thailand*

SOURCE: SEAPRAP
International Development Research Centre
Tanglin P.O. Box 101
Singapore 10

C. Other Studies

INDIA

22

Alosius, S. *A comparative study of the opinion of parents and adolescents towards the introduction of sex education in schools.* M.Ed. thesis, Bangalore University, 1974. Unpublished.

OBJECTIVES

To find the opinion of parents and adolescents towards the introduction of sex education in schools.

METHODOLOGY

Sample: 110 adolescent students from different high schools of Bangalore and their parents were included in the sample.

Data collection and analysis technique: Opinionnaire on sex education on the pattern of Thurstone Method of attitude scale construction.

FINDINGS

1. Both the teachers and adolescents had a favourable attitude to the introduction of sex education in schools.

2. The Christian parents were better disposed to sex education than Hindus or Muslims.

DESCRIPTORS: *Parent Attitudes; Student Attitudes; Secondary School Students; Curriculum Subjects; Sex Education; India*

SOURCE: Head
Population Education Unit
National Council of Educational Research and Training
Sri Aurobindo Marg
New Delhi-110016, India

INDIA

23

Deshmukh, D. Monohar. *A study of pre-university students' awareness of population problem from selected colleges of Bangalore.* M.Ed. thesis, Bangalore University, 1979. Unpublished.

OBJECTIVES

1. To study the second year pre-university course student's awareness of the effect of over-population on socio-economic conditions related to food, health, housing, education and development.

2. To study the difference if any between variations and family background of the students and their awareness of population problem.

3. To study the difference if any between variations in religion of the students and their awareness of population problem.

4. To study the difference if any between levels of involvement in social service activities and their awareness of population problem.

METHODOLOGY

Sample: A proportionate, random sampling procedure selecting 160 students from 6 different colleges of Bangalore city. The proportion of Hindus, Muslims, Christians was kept in the ratio of 13:2:1. The percentage of boys and girls were 56 and 44.

Data collection and analysis technique: Multiple-choice questionnaire, with three choices consisting of 67 items. It was subjected to item analysis and 40 items were retained for the final test.

FINDINGS

1. The general awareness of students towards population problem was found to be moderate i.e. 55 per cent were aware of population problem.

2. Boys were found to be much more aware of the population problem than girls.

3. Family background and religion were not related to students' awareness of population problem.

4. The students involvement in the social service activities, in the reading of newspaper or going to movies had no effect on their population awareness. On the other hand reading general books and listening to radio talks had a significant bearing on the level of population awareness.

DESCRIPTORS: *Population Awareness; Student Attitudes; College Students; India*

SOURCE: Head
Population Education Unit
National Council of Educational Research and Training
Sri Aurobindo Marg
New Delhi-110016, India

INDIA

24

Gupta, Vandana. *A study of the knowledge and attitude of teachers towards the introduction of sex education in school curricula.* M.Ed. thesis, Bhopal University, 1975. Unpublished.

OBJECTIVES

1. To find out whether teachers have adequate knowledge about sex education.

2. To find out the attitude of teachers towards the introduction of sex education in schools.

3. To find out whether there is any difference in the attitude of male and female teachers towards the introduction of sex education in schools.

4. To find out whether teachers belonging to rural-urban areas differ in their attitude towards sex education.

5. To find out whether teachers belonging to different religious groups differ in their attitude towards the introduction of sex education in schools.

6. To find out the ways and means of integrating sex education in the school curricula.

METHODOLOGY

Sample: A random purposive sample consisting of 250 men and women teachers belonging to different religions were drawn from different types of schools (Government and

non-Government) of Bhopal, Indore and Ujjain Divisions of Madhya Pradesh.

Data collection and analysis technique:

1. Knowledge test in the form of a questionnaire consisting of 17 questions on different aspects of sex education.

2. Attitude scale based on the Likert type. The scale consisted of about 43 statements. The respondents were asked to indicate the degree of agreement or disagreement with the statement on a 5-point scale.

FINDINGS

1. The majority of the teachers realized that sex education should necessarily form an integral part of school education.

2. Most suggested that the best way of teaching sex education to children is to introduce it in the school curricula. Some have recommended the use of film.

3. The recommended content of sex education is:

a) Health and hygiene of sex;

b) Anatomy and physiology of reproductive organs;

c) Menstruation and seminal emissions; and

d) Contraceptives.

4. Teachers have suggested that sex education should be imparted along with the teaching of subjects like biology and social studies, health and hygiene.

5. The majority stated that it should be taught by biology teachers, while some teachers preferred that doctors should teach these topics.

DESCRIPTORS: *Teacher Attitudes; Curriculum Subjects; Sex Education; India*

SOURCE: Head
Population Education Unit
National Council of Educational Research and Training
Sri Aurobindo Marg
New Delhi-110016, India

INDIA

25

Mehta, Ganesh Lal. *A study of the opinion of parents and teachers towards introduction of population education in high schools of Bhubaneshwar*. M.Ed. thesis, Utkal University, 1974. Unpublished.

OBJECTIVES

1. To find the opinion of teachers and parents towards the inclusion of certain contents of population education in high school curricula.

2. To study the opinion of parents and teachers regarding the importance of population education in various spheres of social life.

3. To study the opinion of parents and teachers regarding the suitability of school as a proper agency for teaching population education.

4. To study sex differences in

the opinions expressed by the teachers.

5. To study the opinions of parents belonging to different income groups and educational backgrounds.

METHODOLOGY

Sample: A random sample of 100 teachers (50 male and 150 female) and 150 parents drawn from different schools of Bhubaneshwar city. The study was restricted to parents of children studying in Classes IX and X only, as it was convenient to approach the parents through their children.

Data collection and analysis technique: Opinionnaire consisting of 46 items with respondents being asked to record their opinion on a three-point scale, (agree, disagree and undecided). The percentage of responses was analysed for each of the statements in order to interpret the data.

FINDINGS

1. The teachers and parents irrespective of their sex and education background had a favourable opinion towards the inclusion of population content in the education programme. They recommended the inclusion of demographic concepts, economic and social consequences of population growth and the process of human reproduction in the curriculum.

2. Both the teachers and parents however felt that agencies other than schools are more suitable to teach population education.

3. The teachers and parents, irrespective of sex differences or income and education background, opposed teaching human reproduction in schools.

4. The teachers and parents were of the opinion that population education will help create the right attitude towards small family size. Parents from the high income group were more favourably inclined towards this view than middle income parents. Parents of the low income group were strongly opposed to this opinion.

5. While parents were optimistic that the concept of a small family is not only desirable but also achievable through population education, the teachers in general did not agree with this opinion.

DESCRIPTORS: *Teacher Attitudes; Secondary School Teachers; Parent Attitudes; India*

SOURCE: Head
Population Education Unit
National Council of Educational Research and Training
Sri Aurobindo Marg
New Delhi-110016
India

INDIA

26

Nagda, S.L., and others. *A study of the opinion of teachers towards population education.* Tirupati, Population Study Centre, Sri Venkateswara University, 1974.

OBJECTIVES

To find out the existing knowledge and attitude of teachers

towards population related problems.

METHODOLOGY

Sample: 100 teachers of Chittor district.

Data collection and analysis technique: Questionnaire.

FINDINGS

1. Ninety per cent knew the meaning of population education.

2. Sixty five per cent felt that population education and family planning are one and the same.

3. Twenty five per cent considered population awareness and planned parenthood as a part of population education.

4. Ninety per cent felt that population education is necessary for the youth for responsible parenthood.

5. Fifty per cent considered that the standard of living is not affected by the size of family.

6. About 90 per cent felt that the size of the family can be planned by all human beings.

7. Most agreed that too many children would affect the health of the mother and that spacing of children is necessary for maintaining the health of the mother.

8. Most were of the opinion that a small family norm is necessary to lead a happy and comfortable life.

9. The majority agreed that our country cannot meet the needs of its people if the rate of growth of population remains the same.

10. Most felt that population education would develop right attitudes concerning family life among the younger generation.

11. Ninety per cent considered that late marriage is one of the methods of controlling family size.

12. Sixty per cent thought that over-population leads to economic and social instability in the country.

13. Most felt that it is necessary to impart knowledge of human reproduction and nutrition to our masses.

14. Fifty per cent considered exhibitions and film shows as appropriate methods for creating population awareness among the community whereas 30 per cent considered lectures by experts and group discussions as appropriate methods.

DESCRIPTORS: *Teacher Attitudes; Population Awareness; India*

SOURCE: Head
Population Education Unit
National Council of Educational Research and Training
Sri Aurobindo Marg
New Delhi-110016, India

INDIA

27

Nagda, S.L., and others. *A survey of the perception of the students of the women's colleges towards population education.* Tirupati, Population Study Center, S.V. University, 1975.

OBJECTIVES

To find out the perception of the students of Women Colleges towards the introduction of population education.

METHODOLOGY

Sample: 200 girl students of the Women's College, Nellore in Andhra Pradesh; 80 per cent from urban families and 20 per cent from rural areas.

Data collection and analysis technique: Questionnaire.

FINDINGS

1. Seventy five per cent knew the meaning of population explosion.

2. More than 65 per cent considered population education and family planning as identical.

3. Ninety per cent realized that our country cannot meet the growing needs of its people if the population continues to grow at the present rate.

4. Ninety per cent felt that a small size family would lead to happy and comfortable life and most agreed that population education is necessary to assist youth initiate responsible parenthood.

5. Most agreed that the size of the family can be planned by a human being.

6. Most thought that there must be a sufficient gap between two successive children for the health of the mother and the children

7. Fifty per cent considered late marriage as one of the methods of controlling the size of the family.

8. Eighty per cent thought that over-population leads to socio-economic instability in the country.

9. Forty per cent favoured seminars for imparting population education at the collegiate level, 26 per cent favoured lectures and 80 per cent favoured the integration of population education with collegiate curriculum.

DESCRIPTORS: *Student Attitudes; Women Students; University Students; India*

SOURCE: Head
Population Education Unit
National Council of Educational Research and Training
Sri Aurobindo-Marg
New Delhi-110016, India

INDIA

28

Patel, A. Prahlad. *A study of knowledge and attitude towards human reproduction among XI standard students in some urban schools.* M.Ed. thesis, University of Baroda, 1973. Unpublished.

OBJECTIVES

1. To find what information students have about the human reproduction system.

2. To understand the attitude of students towards sex education.

3. To find out the various sources from where they obtained this information.

4. To find out the knowledge of students about contraceptive devices.

METHODOLOGY

Sample: 50 students (32 boys and 18 girls) belonging to different caste groups aged 14-19 years, selected from a few urban schools

Data collection and analysis technique: Knowledge test containing 42 objective-type questions to find out the pupils' knowledge of human reproduction. Questionnaire to find out their attitude to the introduction of sex education in schools.

FINDINGS

1. Students in general were aware of the mechanism of human reproduction, but most of them were not aware of the scientific basis of reproduction.

2. The majority (90 per cent) wanted the introduction of sex education in schools.

3. The majority were of the opinion that science teachers are well suited to the teaching of sex education.

4. About 94 per cent felt that their parents would not object to the teaching of sex education in schools.

DESCRIPTORS: *KAP; Student Attitudes; Secondary School Students; Sex Education; India*

SOURCE: Head
Population Education Unit
National Council of Educational Research and Training
Sri Aurobindo Marg
New Delhi-110016, India

INDIA

29

Patel, Vithabbhai. *A study of population awareness of pupils of standard X at Varnama High School.* M.Ed. thesis, Gujarat University, 1974. Unpublished.

OBJECTIVES:

1. To find out the awareness of students about the population problem.

2. To find out their life aspirations.

METHODOLOGY

Sample: Fifty students of Standard 10 of Varnama High School belonging to 18 different caste groups, aged 15-20 years.

Data collection and analysis technique: Interview to elicit background data, awareness of social problems, life aspirations, marriage and family, economic expectations, family-size values, parents' influence on family size values, and mortality expectations.

FINDINGS

1. Students in general were aware of the population problem faced by the country.

2. Most were not aware of the importance of the family planning programme.

3. Whereas most of the girls wished to live and serve in the city, nearly half the number of boys were willing to live in a village, but serve in the city.

4. A good number considered late marriage as an advantage.

5. The students had no independent decision regarding the age at marriage and selection of mate.

6. They had favourable attitude towards education in general.

7. Most of the boys did not favour higher education for the daughters, whereas the girls wanted to have higher education.

8. Most believed in the traditional value of having more sons.

9. In most cases, students did not discuss the family problems with parents.

10. Girl students were more knowledgeable about family planning than boys.

DESCRIPTORS: *Population Awareness; Student Attitudes; Secondary School Students; India*

SOURCE: Head
Population Education Unit
National Council of Educational Research and Training
Sri Aurobindo Marg
New Delhi-110016, India

INDIA

30

Pathak, M.J. *A study of population awareness among fathers of students of standard X of Varnama village.* M.Ed. thesis, University of Gujarat, 1974. Unpublished.

OBJECTIVES

1. To find out whether the parents of school children were aware of the population situation in India.

2. To find out their opinion towards the desirable size of the family.

3. To find out their reaction to the introduction of population education in schools.

METHODOLOGY

Sample: Forty fathers of the students of Standard 10 of Varnama High School.

Data collection and analysis technique: Questionnaire.

FINDINGS

1. Fathers were not aware of the consequences of a large family size on the society or the nation.

2. Family size was considered a personal matter.

3. The majority of parents had married at an early age but wanted their children to marry later.

4. Higher caste people believed more in family planning as compared to low caste people.

5. The higher the level of education of the father, the higher was the aspiration for achievement.

6. Parents wanted population education to be included in school curricula.

7. Fathers who were well informed about population problems favoured the introduction of sex education in the school curricula.

8. Awareness of a small family was positively related to the awareness of national welfare.

DESCRIPTORS: *Parent Attitudes; Population Awareness; Family Size Norms; India*

SOURCE: Head
Population Education Unit
National Council of Educational Research and Training
Sri Aurobindo Marg
New Delhi-110016, India

INDIA

31

Poffenberger, Thomas. *Population learning among secondary school students in an Indian village.* Baroda, University of Baroda, 1971.

OBJECTIVES

To find out the perception and knowledge of the secondary school students about population problems.

METHODOLOGY

Sample: About 100 students of grade XI (average age 17) of a village secondary school in Baroda district of Gujarat state.

Data collection and analysis technique: Survey method involving questionnaire and interview.

FINDINGS

1. The village secondary school students were aware of the population problem.

2. They gained this knowledge through the mass media, particularly newspapers and extension education efforts of the family planning programme such as film shows, exhibitions and the visits of family planning workers to homes.

3. The students voted in favour of a small family and this was mainly prompted by the difficulty experienced by their parents in rearing a large family.

DESCRIPTORS: *Student Attitudes; Secondary School Students; Population Awareness; India*

SOURCE: Head
Population Education Unit
National Council of Educational Research and Training
Sri Aurobindo Marg
New Delhi-110016. India

INDIA

32

Poffenberger, Thomas. *A study of the knowledge and attitudes of Indian college students towards population related problems.* Ann Arbor, Center for Population Planning, University of Michigan, 1970.

OBJECTIVES

To find the opinion of male and female college students towards population related issues.

METHODOLOGY

Sample: 208 students of Delhi University (out of which 100 were girls) selected at random.

Data collection and analysis technique: Questionnaire and some interviews.

FINDINGS

1. Ninety-six per cent of boys and 100 per cent of girls agreed that the population of India was growing too rapidly.

2. Eighty-three per cent of boys and 92 per cent of girls agreed that the population problem was serious.

3. While the respondents indicated that they favoured a small family norm propagated by the Government of India in the interest of the nation, a few favoured a small family motivated by the welfare of the individual families.

4. The average number of children desired by the boys was 2.6 while the average number desired by the girls was 2.2.

5. The majority of the boys and girls wanted at least one son among the children.

6. While most of the girls approved of family planning methods, 19 per cent of the boys disapproved because they believed that the methods were unnatural and dangerous.

DESCRIPTORS: *Student Attitudes; University Students; Population Awareness; India*

SOURCE: Head
Population Education Unit
National Council of Educational Research and Training
Sri Aurobindo Marg
New Delhi-110016, India

INDIA

33

Poffenberger, Thomas and Kim Sebaly. *The socialization of family size values: youth and family planning in an Indian village.* Ann Arbor, Center for South and Southeast Asian Studies, University of Michigan, 1976. 160 p. (Michigan papers on South and Southeast Asia, 12)

OBJECTIVES

1. To collect data that might be useful in planning the development of population education at the University of Baroda in Gujarat State, India.

2. To analyse the attitudes of students of 11th standard concerning population and fertility knowledge, families and village and the country.

3. To find out what it is like to grow up in a rapidly changing society.

METHODOLOGY

Sample: 39 students from village Varna in Gujarat, India were selected for interview (26 males and 13 females); the total attendance in the standard 11. The students, were between 16 and 19 years of age, with modal age 17 years. Six of the males and one female were married.

Data collection and analysis technique: Interview by a male and a female interviewer with previous village interviewing experience. The interviewers were proficient in Gujarati (the local language) and English.

FINDINGS

1. The desire to have smaller families was not necessarily associated with a higher standard of living.

2. Education that has not increased the economic status of the village but it has enabled boys from high caste families to take up jobs available to them because of caste connections. The education of village girls was associated largely with the need to increase their value in bartering in the marriage market.

3. Some of the educated lower caste and community boys get better jobs but the available jobs tend to go to those with higher social and economic status. The possibility of education paying off for the poor was severely limited.

4. Although the students indicated a desire for relatively small families, there was also evidence of acceptance of traditional roles associated with high fertility. This fact may be expected to slow the decline in fertility in the area.

DESCRIPTORS: *Student Attitudes; Secondary School Students; Population Awareness; Family Size Norms; Family Planning Education; India*

SOURCE: CSSEAS
130 Lane Hall
University of Michigan
Ann Arbor, Michigan 48109
U.S.A.

INDIA

34

Prabhakar, G. *A study of the opinion of students of a few secondary schools of Bangalore city towards introduction of population education at the secondary school level.* M.Ed. thesis, Bangalore University, 1975. Unpublished.

OBJECTIVES

At the secondary level, to find out whether:

1. There are different opinions amongst boys and girls towards the introduction of population education.

2. The students' opinions regarding the introduction of population education differ with age;

3. Students from different schools have different opinions about the introduction of population education; and

4. Students differ in their opinion on the introduction of population education according to religious beliefs.

METHODOLOGY

Sample: 300 male and female secondary school students belonging to different age groups, religion and type of school drawn on the basis of purposive sampling.

Data collection and analysis technique: Verbal response of agreement or disagreement to different statements developed on the lines of Likert's summated rating scale. There were 29 statements out of which 19 were positive and 10 were negative. Students responded to the statements on a four point scale.

FINDINGS

1. The students, both boys and girls were of the opinion that the introduction of population education at the secondary school level was absolutely necessary.

2. The students of each age group, expressed favourable opinions towards the introduction of population education in schools.

3. Students from each type of school favoured the introduction of population education in school.

4. Students from all religious backgrounds favoured the introduction of population education at the secondary school level.

DESCRIPTORS: *Student Attitudes; Secondary School Students; India*

SOURCE: Head
Population Education Unit
National Council of Educational Research and Training
Sri Aurobindo Marg
New Delhi-110016, India

INDIA

35

Rao, A.H.K. *A study of the attitude of parents and teachers towards the introduction of sex education in secondary schools.* M.Ed. thesis, Mysore University, 1974. Unpublished.

OBJECTIVES

To find out the attitude of parents and teachers towards the introduction of sex education in secondary schools.

METHODOLOGY

Sample: 300 teachers from 31 secondary schools and 300 parents from the city of Mysore.

Data collection and analysis technique: Questionnaire.

FINDINGS

1. Both parents and teachers favoured the introduction of sex education in schools.

2. They favoured a scientific approach to the teaching of sex education.

3. They felt that sex education is very crucial to students for the development of a balanced personality.

DESCRIPTORS: *Parent Attitudes; Teacher Attitudes; Secondary School Teachers; Curriculum Subjects; Sex Education; India*

SOURCE: Head
Population Education Unit
National Council of Educational Research and Training
Sri Aurobindo Marg
New Delhi-110016
India

INDIA

36

Rao, D. Gopal. *A study of the attitude of parents and teachers towards sex education.* New Delhi, Population Education Unit, National Council of Educational Research and Training, 1976.

OBJECTIVES

To find out:

1. the attitude of parents and teachers towards the introduction of sex education in schools;

2. whether there is any difference of opinion among teachers working in different types of schools.

3. whether male and female teachers differ in their opinion about sex education.

METHODOLOGY

Sample: 300 parents and 300 teachers of Delhi.

Data collection and analysis technique: A scale consisting of 65 items based on Likert technique.

FINDINGS

1. Ninety per cent of the teachers and 60 per cent of the parents favoured the teaching of sex education in schools.

2. Both parents and teachers were unanimous in suggesting the teaching of anatomy and human reproduction and health and hygiene of sex. They did not favour the teaching of contraception at school.

3. While teachers wanted sex education to be integrated with existing subject like biology, the parents wanted it to be taught as a separate subject.

4. There was no significant relationship between religion and acceptance of sex education.

DESCRIPTORS: *Parent Attitudes; Teacher Attitudes; Curriculum Subjects; Sex Education; India.*

SOURCE: Head
Population Education Unit
National Council of Educational Research and Training
Sri Aurobindo Marg
New Delhi-110016
India

INDIA

37

Srivastava, N.N. *A study of the knowledge and attitude of teachers towards the introduction of population education in school curricula.* M.Ed. thesis, Bhopal University, 1973. Unpublished.

OBJECTIVES

1. To study the awareness of school teachers towards population problems in the country.

2. To find out the attitude of school teachers towards introduction

of population education in school curricula.

3. To find out possible content to be included in the school curricula on the basis of opinion of teachers regardings the ways and means of introducing population education in schools.

METHODOLOGY

Sample: A random purposive sample of 300 teachers from the districts of Rewa and Bhopal, in Madhya Pradesh belonging to different religions and type of schools.

Data collection and analysis technique: Questionnaire. An attitude scale using a combination of Thurstone and Likert methods was developed.

FINDINGS

1. The majority of the teachers were aware of the population problem.

2. The consequences of over-population in their opinion were unemployment, under employment and low standard of living.

3. The majority felt that if the growth of population is not checked, the economic development of the country will be hampered.

4. Most suggested that the best way of checking over-population is by educating the younger generation.

5. The majority commended a family size up to four children, out of which at least two should be sons.

6. Most were of the opinion that population education should form a part of school education, only at the university stage and that it should be integrated with existing school subjects especially through the social studies course.

7. The majority felt that the course should be a subject for annual examination.

DESCRIPTORS: *Teacher Attitudes; Population Awareness; India*

SOURCE: Head
Population Education Unit
National Council of Educational Research and Training
Sri Aurobindo Marg
New Delhi-110016
India

INDIA

38

Varghese, P.V. *A study of the attitude of teachers towards different aspects of population problems.* M.Ed. thesis, Bangalore University, 1970. Unpublished.

OBJECTIVES

To find the attitude of different aspects of population problems.

METHODOLOGY

Sample: 276 teachers drawn from primary and high school levels from the city of Bangalore formed the sample. Stratified sampling procedure was adopted in the selection of the sample.

Data collection and analysis technique: A four-point attitude scale to find the attitude of teachers towards population education,

sex education and family planning.

FINDINGS

1. The primary and high school teachers differed in their attitude towards population education.

2. The male and female teachers differed in their attitude towards population education.

3. The marital status of teachers had no bearing on the attitude towards population education.

4. Teachers belonging to different religious groups had the same attitude towards population education.

5. The male and female teachers differed in their opinion towards sex education.

6. The teachers belonging to different religions differed in their attitude towards sex education.

7. The marital status of teacher was not related to their attitude towards sex education.

8. Whereas the religion of teachers was significantly related to their attitude to family planning and sex education, it was not related to their attitude towards population education.

DESCRIPTORS: *Teacher Attitudes; Primary School Teachers; Secondary School Teachers; Sex Education; India*

SOURCE: Head
Population Education Unit
National Council of Educational Research and Training
Sri Aurobindo Marg
New Delhi-110016
India

PHILIPPINES

39

Ministry of Education, Culture and Sports. Population Education Program. *Study on the fertility behaviour of male and female teacher-trainees on population education.* Manila, 1974. 12 p.

OBJECTIVES

1. To determine the fertility rate of married supervisors, principals and teachers who participated in the one-week training programmes conducted in the different regions of the country.

2. To find out the type of family planning methods known and used by them.

3. To gather data on their demographic characteristics such as age at marriage, religion, socio-economic and educational background and family structure.

METHODOLOGY

Sample: 1,086 respondents (295 males and 791 females) randomly selected from the 11 regions of the country.

Data collection and analysis technique: Self-administered personal data sheets.

FINDINGS

1. The sample consisted of 1,086 former teacher trainees (295 males and 791 females) randomly selected from the 11 regions of the country. These teacher trainees previously attended a 5-day seminar on population education.

2. The family planning method most known by the participants was rhythm and the least was breast-feeding.

3. Again, rhythm was the method used by most of the participants and the least was vasectomy.

4. Mean age at marriage of the participants is 25.91 or 26 and 26.59 or 27 for the spouse.

5. A very high percentage of the teacher-participants and their spouses are Catholics.

6. Majority of the trainees come from low income families making them decide not to accept any relative-boarder and if so, just one or two.

7. On the position of the spouses, a very high percentage come from the field of education and the lowest percentage consists of servicemen.

8. Most of the participants are bachelor-degree holders. Same is true with their spouses but they represent different fields of concentration. Majority came from the field of education and a very small percentage did not finish the elementary grades schooling.

9. Both participants and their spouses attended non-sectarian institutions in all levels.

DESCRIPTORS: *Fertility Behaviour; Teacher Attitudes; University Students; Philippines*

SOURCE: Chief
Population Education Program
Ministry of Education, Culture and Sports
Arroceros Street
Manila, Philippines

PHILIPPINES

40

University of the Assumption.
Knowledge and attitude towards population education possessed by seniors and teachers in selected secondary schools in Pampanga.
Pampanga, 1979. 4 p.

OBJECTIVES

To determine:

1. The adequacy of the knowledge on population education possessed by seniors and teachers of selected secondary schools in Pampanga, taking into account the variables of sex and type of school as dependent variables.

2. Whether there are any significant differences in the knowledge on population education possessed by seniors and teachers of selected secondary schools in Pampanga, controlling for the variables of sex and type of school.

3. What attitudes on population education seniors and teachers of selected secondary schools in Pampanga possess, controlling for

the variables of sex and type of school.

4. Whether there are significant differences in the attitudes towards population education possessed by seniors and teachers of selected secondary schools in Pampanga, controlling for the variables of sex and type of school.

METHODOLOGY

Sample: Through proportional random sampling, six private schools and nine public schools were chosen as participating institutions for the study. The questionnaire was administered to 10 seniors and to four social and natural science teachers from each of the participating institutions. The total student respondents were 150 seniors, 69 of whom are males and 81 females. Ninety were enrolled in the nine participating private school. The teacher respondents are 55 natural and social science teachers of whom seven were males and 45 females. Twenty-nine taught in the participating public secondary schools and 22 in the participating private secondary schools.

Data collection and analysis technique: Questionnaire consisting of three parts: Part 1 - Personal data; Part 2 - Population education concepts (64 items); and Part 3 - Attitude towards population education issues (40 items). Of the 40 items, 27 are statements favourable to population education while 13 are unfavourable to population education. To analyse the data, means were computed to assess adequacy of knowledge and also controlling for the variables of sex and type of schools. Analyses of variance were performed to test for significant differences in knowledge. Chi-square values were used to test significant differences in attitudes.

FINDINGS

1. The total student respondents seemed to have an adequate knowledge of population education. However controlling for the variable of sex, a significant difference was obtained in favour of the female senior respondents.

2. The total teacher respondents had adequate knowledge of population education.

3. Both student and teacher respondents generally possessed positive attitudes towards population education.

The results of the study confirmed adequacy of knowledge towards population education possessed by the seniors and teachers of selected secondary schools in Pampanga. The variables of sex seemed to affect the knowledge possessed by the senior respondents. The respondents had a generally positive attitude towards population education.

DESCRIPTORS: *Teacher Attitudes; Secondary School Teachers; Student Attitudes; Secondary School Students; Philippines*

SOURCE: University of the Assumption
San Fernando, Pampanga 2001
Philippines

THAILAND

41

Orrawin Trocki. *Attitudes toward family planning and population education among teachers and students.* Singapore, Southeast Asia Population Research Awards Program, 1977. 128 p. (SEAPRAP research report no. 21)

OBJECTIVES

1. To identify the demographic, social and economic characteristics of two groups of students and teachers of the teachers colleges and the Functional Literacy Programme respectively.

2. To study the attitudes toward population education and family planning currently held by two of these groups of students and teachers.

3. To establish whether there are any significant differences in attitudes among students and their teachers in these different groups.

4. To measure the effect of the Functional Literacy Programme on the change in knowledge, attitudes and practices in family planning of the adult education.

METHODOLOGY

Sample: For the respondents from the Functional Literacy Programme, one province was selected at random from each of the four regions of Thailand; then four schools were selected at random from each province. All the 340 adult students who came to class on the day of the interview were included in the sample. Sixteen teachers were included on a case-study basis. Two teachers colleges from the four regions were randomly selected and from each college, 50 teachers and 100 students of the graduating class of the Higher Certificate of Education curriculum were randomly selected, accounting for 372 teacher-respondents and 687 student respondents.

Data collection and analysis technique: Two sets of questionnaires were used; one for the adult students and another set for the teachers of the Functional Literacy Programme and the teachers and students of the teachers colleges. The questionnaire for the adult students were personally administered by the researchers. Frequencies and percentage were used in analysing descriptive data. Mean scores were calculated to facilitate interpretation when the Likert's scale was used and chi-square values were computed to test the significance level of the differences in the responses of the teachers and students.

FINDINGS

The Ideal Family

1. The Teachers College (TC) teachers thought that Thai women should get married at 25-29 years old, the TC students at 20.24 years and adult students agreed with the TC students.

2. The TC teachers and students preferred 25-29 years old as the ideal age of marriage for men. Equal proportions of adult students preferred the 20-24 and the 25-29 age groups.

3. The majority of the respondents in each group preferred the nuclear family to the extended family.

4. The majority of all respondents preferred a small family of 4-6 members. Most of the TC teachers and TC students (8 out of 10) chose 2-3 as their ideal number of children while a smaller majority of the FLA adults (6 out of 10) also chose.

5. The TC teachers and students mostly chose two years as the ideal interval for all child spacing. Adult students preferred to wait 2-3 years after the first child.

6. Most respondents would keep on having children in order to get either sex.

7. Attitudes toward Population and Family Planning. Most respondents agreed that Thailand needs family planning. They did not agree that the government should limit the number of children per family and were not ready for the legalization of unconditional abortion. A few were opposed to family planning on religious grounds.

8. Attitudes toward Population Education. The respondents preferred the inclusion of population education at the secondary college and out-of-school levels, but not at the elementary level. Population education should be taught in the Teachers Colleges by integrating with various subjects rather than as a separate, required course. The majority agreed that both family planning and birth control methods for adults should be advertised through the mass media. The adult students preferred the inclusion of birth control methods in the curriculum of the Functional Literacy Programme and the secondary school level, but not at the elementary level.

9. KAP Survey of Adult Students. After a lesson on family planning, it was evident that the adult students had increased their knowledge of birth control methods. One-fifth of the adult students still thought family planning was against their religion. Nine out of 10 adult students showed an intention of using birth control methods. Four-fifths of the adult students preferred that the wives use the birth control methods rather than the husbands.

10. About one-third of the married adult students have used some kind of birth control method. In the post-test interview this proportion had increased to some extent.

DESCRIPTORS: *Student Attitudes; Teacher Attitudes; University Students; Family Planning Education; Thailand*

SOURCE: SEAPRAP
International Development Research
Tanglin, P.O. Box 101
Singapore

THAILAND

42

Suchart Somprayoon. *A study on Thai prospective teachers' opinions toward family life and family planning including sex education.* A research undertaken with the assistance of Population Council grant. Bangkok, Faculty of Education, Chulalongkorn University, 1981. 98 p.

OBJECTIVES

1. To determine the opinions of prospective teachers toward family life and family planning including sex education.

2. To compare the opinions toward family life and family planning and sex education between two groups of prospective teachers - one who had studied the subject and one who had not.

3. To compare the opinions toward family life, family planning and sex education between these two groups in terms of different learning experience and sex.

METHODOLOGY

Sample: 900 fourth year teacher trainees from 15 colleges of education throughout the country were drawn from two groups: (a) those who had learned about family life, family planning and sex education and (b) those who had not been exposed to these subjects.

Data collection and analysis technique: Questionnaire containing 100 items in a rating scale. The data were analysed to ascertain means, standard deviation and variances for each item, each major area and total of 100 items. In order to determine the significance of the statistical differences between mean numbers of opinions made by the subjects of learned and unlearned groups, the t-test of significance and also the F-test of significance were employed.

FINDINGS

1. There were 58 supported items and 17 rejected items for the learned group, and 57 supported items and 16 rejected items for the unlearned group.

2. The learned group supported nine negative items and rejected one positive item. Lecturers of population education courses should select some effective teaching strategies in order to counteract the support of negative items by the learned group.

3. Both groups supported the family life and family planning courses that include sex education, and concurrently backed up the offering of more courses in the colleges of education of universities.

4. The findings strongly supported the need for improving the curriculum and instruction regarding family life and family planning including sex education in the colleges of education of universities. In addition, the qualification of staff, textbooks, and other teaching facilities should be carefully re-examined and increasingly improved.

5. The courses about family life and family planning including sex education in the colleges of education of universities should be specially enriched and broadly extended. At least two credits of these courses should be required in the general education or other areas of study in the curriculum of all education students.

DESCRIPTORS: *Student Attitudes; University Students; Teachers Colleges; Family Life Education; Family Planning Education; Sex Education; Thailand*

SOURCE: Faculty of Education
Chulalongkorn University
Phya Thai Road
Bangkok 10500, Thailand

THAILAND

43

Thawal Raksil. *Attitude of guardians and private higher secondary school teachers in Bangkok Metropolitan toward the introduction of sex education into the school system.* M.Ed. thesis, Mahidol University, 1979. 105 p. Unpublished. In Thai with English abstract.

OBJECTIVES

To study and compare the attitudes of the guardians and private higher secondary school teachers in Bangkok Metropolis toward the introduction of sex education into school systems.

METHODOLOGY

Sample: 168 guardians and 167 teachers.

Data collection and analysis technique: Questionnaire.

FINDINGS

1. Both guardians and teachers had positive attitudes toward the introduction of sex education into the school systems.

2. There was no statistically significant differences between the guardians and teachers' acceptance of the introduction of sex education into school systems.

3. When the variable of education level was controlled, there was no attitude differences toward the introduction of sex education into school systems between the two groups.

4. When the variables of sex and marital status were controlled:

a) There was no statistically significant differences among the guardians' attitudes toward the introduction of sex education into school systems;

b) There was statistically significant differences between men and women teachers' attitudes toward the introduction of sex education into school systems at the .01 level (men teachers had a more positive attitude than women) and there were also statistically significant differences in the interaction effect between sex and marital status toward the introduction of sex education into school systems. The attitude comparison of the other pairs of the teachers (single and married men, single and married women, single men and women, married men and women, single men and married women) showed statistically significant differences at the .05 level but not at the .01 level. The only pair which showed no statistical significance at the .05 level was between the married men and the single women teachers. It should be noted that the attitude differences about the introduction of sex education into school systems of teachers was influenced by the variable of sex more than the other variables.

DESCRIPTORS: *Teacher Attitudes; Secondary School Teachers; Parent Attitudes; Curriculum Subjects; Sex Education; Thailand*

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and Humanities
Mahidol University
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Thailand

THAILAND

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Watit Utarmat. *Marriage-related values of higher secondary students in Bangkok Metropolis.* M.Ed. thesis, Mahidol University, 1981. 182 p. In Thai with English abstract.

OBJECTIVES

1. To study marriage-related values and 13 components of those values among higher secondary students in Bangkok Metropolis which include dating, premarital period, engagement and dowry, wedding ceremony, age at first marriage, mate selection, post-marital residence, goals of marriage, family size, couple's rights and obligations, expectations in happy marriage, marital adjustments and remarriage.

2. To find out whether these values were positive or negative; traditional, neutral or modern; and whether they were affected by the variables of sex, learning experience in population education programmes of study, number of siblings and parent's marital status.

METHODOLOGY

Sample: 453 higher secondary students selected by stratified sampling from a population of 45,967 higher secondary students in Bangkok Metropolis.

Data collection and analysis technique: One test of marriage-related values concerned with measuring positive-negative values, and another with values for traditionalism, neutrality and modernism. Scores were analysed and categorized according to the pre-set criteria. The categorized values were then analysed according to the above variables to compare whether there were significant differences among them.

FINDINGS

1. The majority of the sample (97.79 per cent) had positive marriage-related values. Fifty-five per cent were modern values and 45.0 per cent neutral values. There were no traditionalist values among the samples.

2. The sample of different programmes of study had significantly different positive-values at .01 level. With regard to the sample of different variables of sex, learning experience in population education, number of siblings and parent's marital status, there were no significantly different positive values at .05 level.

3. With regard to traditionalism, neutrality or modernism values, the sample of different parent's marital status had significantly different modernism values at .01 level. However, it was found that there was no significant difference of modernism or neutrality values according to the differences of the variables of sex, learning experience in Population Education, programmes of study and number of siblings at

.05 level.

4. There were significant differences of positive values of some marriage-related component values among the samples of different variables of sex, programme of study, parent's marital status and number of siblings. It was also found that there were no significant differences of positive values of all stated components according to differences of learning experiences in population education.

5. There were significant differences of modernism and neutrality values of some marriage-related component values among the samples of different variables of sex, programme of study and parent's marital status. It was also found that there was no significant difference of modernism and neutrality values of all stated components according to difference of learning experience in Population Education.

6. The fact that learning experiences in Population Education have no significant effect on marriage-related values, indicates that the existing population education programmes in school system do not contribute to create such values among students; which is one of the major objectives of the curriculum.

DESCRIPTORS: *Student Attitudes; Secondary School Students; Social Values; Marriage; Thailand*

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Section Two

EVALUATING PERSONNEL TRAINING

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A. Analysis of the studies

One of the most important components of a population education programme is personnel training. Training becomes especially important when one considers the controversial and value laden nature of population education. As teachers are intended to be the primary transmitter of information and active agents in promoting attitudinal and behavioural changes with regard to population-related issues, they are expected to be sufficiently knowledgeable and skillful in handling population education and its highly controversial and sensitive topics. This is the reason why countries are investing more in personnel training than any other programme components.

The majority of the countries are undertaking personnel training on a massive scale. The training of teachers and other personnel is the most difficult to undertake among all other population education activities because of the huge numbers who need to be trained within given financial and time limits. Two types of personnel preparation are conducted: (a) the usual three-day orientation of administrators such as the key personnel of the project, heads of institutions and departments, professors and deans of universities and colleges, education officers, supervisors and heads of schools; (b) one-week to one-month training of project personnel, curriculum developers, teacher educators, resource persons, trainers, teachers and field supervisors. In training these various personnel, different models have been used by the countries. These include hierarchical face-to-face training, peer training, mobile training, modular or self-learning, correspondence approach, educational radio and ETV training, internship and attachment and eclectic training models.

The following questions are often asked when deciding which model to use. What is the most effective model in delivering population education content and methodology and in achieving programme objectives in terms of increasing each teacher's knowledge, attitude and behaviour and skills in population education? What is the most feasible training model that will have the maximum coverage in the training of teachers and other personnel without sacrificing the quality of training within financial, physical and systems contraints? No study has so far been done that can show which model is more effective in terms of its economic and administrative feasibility as well as in bringing about the greatest changes in teachers' knowledge, attitude and behaviour. There are results available of pre- and post-tests undertaken to determine changes in knowledge and attitude of the trainees after their exposure to a single training model. All training programmes being conducted in population education in the countries have built-in evaluation mechanisms. Most studies have evaluated the effectiveness of the training programmes in terms of changes in knowledge and attitude and in how they were conducted or managed. In this way it can be determined whether the objectives, content, activities, time duration, resource persons or trainers, and training

methodologies used contributed to the success of the training programmes.

Nine studies are included here, one of which is a summary of four training evaluation reports on Thailand's series of personnel training programmes. Five studies came from the Philippines, two studies (including a summary of evaluation of four training programmes) came from Thailand, one from India and one from Bangladesh. All the studies had been variously conducted from 1973 to 1979. Seven are regarded as exemplary studies and two are included in section three as other studies.

Three studies measure the changes in knowledge and attitude of various types of population education personnel after their exposure to the training programme. Two evaluate the conduct of the training programmes, specifically assessing the contribution of its various components such as its objectives, content, activities, methodologies, training materials, trainers and time allotment to the success of the programmes. One is an experimental study comparing the difference in the performance of those teachers who have been trained vis-a-vis those who have not been trained but were given population education curriculum guides. Another is a baseline study assessing the levels of knowledge, attitude and skills and the training needs of teachers aimed at helping trainers develop a training programme that will answer these training needs. There is one follow-up study which determines the effect or impact of the training programme on the actual skills and performance of teachers - whether they are teaching population education in the classroom or undertaking population education activities long after they have attended the training. The last study describes the various evaluation designs of the training programmes held in the Philippines.

The instruments used for gathering data on the effectiveness of the training programme included pre- and post-tests, log books and diaries, observations, and questionnaires. They determined the achievement of the objectives and the conduct or management of the training, the incoming knowledge and skills of respondents and also monitored the effects of the training programme long after it has been conducted. While some studies evaluate the effectiveness of a training programme on one category or personnel, other studies compare its effects on various types of personnel such as key project personnel, heads and administrators of various units and departments in education, faculty members of colleges and universities, supervisors, superintendents, headmasters or principals and secondary and elementary school teachers.

The sample size of the studies generally depended upon the numbers of trainees who attended the training programmes. Since most of the studies made use of pre- and post-tests to determine the effectiveness of the training on the trainees, all the trainees who attended the training were included in the sampling. The samples may have come from one training course from one university or may have been selected from several workshops and training seminars held in a number of places in one region or several regions. Thus, the sample size ranged from 50

to 8,000 respondents found in one locality or in most cases in several districts or regions on a semi-nationwide basis.

Based on the few studies that are included in this section, the following generalizations can be made:

1. The training programmes in the four countries (Bangladesh, India, Philippines and Thailand) included in this section were generally effective in creating significantly positive changes in knowledge about population issues among the various personnel engaged in population education. A number of studies in fact have shown that these personnel already had a reasonable to high degree of knowledge about population even before they underwent the training programme. One reason given was that these particular groups of audiences had been exposed before to population messages from various sources such as attendance at previous meetings, through the mass media and from colleagues and friends. Two studies however expressed disappointment in the results of long training programmes which did not result in significant gains in knowledge. Despite the extensive training programme given to the key personnel in Bangladesh and teachers, supervisors, and principals in the Philippines, the results in change in knowledge did not come up to the level of expectations. There was only a minimal gain in knowledge from the trainees who started off initially with little knowledge about population issues and population education. In the case of Bangladesh, the reasons given were that many of the trainees were the wrong persons to receive training, were initially against the programme and were near retiring age. In the case of the Philippines, the following reasons were given for the disappointing result: (a) test items may have been too difficult; (b) there was too much subject matter covered in too short a time; (c) trainees had difficulty in recalling facts as most of them were middle-aged.

2. Half the studies showed a change in attitude from an already initially desirable attitude among the trainees to a more significantly positive change in attitude after the training programme. This was due to the fact that the trainees had been exposed before and were aware of population education problems. By gaining further knowledge and information, old beliefs and wrong attitudes were consequently corrected. The other half of the studies showed no change in attitude among the trainees after the training programme. They started off with some favourable attitudes towards the programme and this remained unchanged. The ages of respondents were given as one reason for this. One study even showed a slightly negative change in attitude - from a very highly desirable attitude to a lower one among the headmasters and education officers after exposure to the training programme. The study explains that this negative change was a result of an increased knowledge base and a better understanding of the issues.

3. The above analysis in knowledge and attitude changes shows that as one learns more about the correct concepts and information about population facts and issues, a corresponding change in attitude results, whether in the direction of positive or negative change.

4. Because of the training programmes, trainees gained a better concept of population education; learned that population awareness is a part of population education, that population education and family planning are not one and the same; and can now trace the relationship between different aspects of quality of life to population education.

5. Exposure to the training programmes corrected previously held negative attitudes making the different types of personnel agree that population education can be taken up in schools without being an additional burden for teachers and is necessary for developing responsible parenthood among the youth. They also believed that sex education should be a part of population education, that the size of the family could be controlled and that small family size is conducive to higher standard of living which will promote the health and happiness of the mothers and children. However, the majority did not agree that the government should dictate the size of family one can have and were against the advertisement of birth control methods.

6. One study from the Philippines showed that, by and large, the teachers who have not attended any population education training programmes could teach the subject as effectively as the trained teachers with the use of the prepared curriculum guides.

7. Not only have the outcomes in terms of the trainees' knowledge and attitudes been the subject of evaluation but also the way which the training programmes have been undertaken. Only two studies dealt with this and both gave positive findings. The two studies showed the following: (a) the objectives of the training programme were achieved and fulfilled the needs of the trainees; (b) with regard to the Philippine study, family planning was considered the most useful topic followed by the effects of rapid population growth and demography; (c) the instructional materials used were adequate and effective; (d) the presentation of the topics was stimulating and understandable; (e) discussion and demonstration of the population education units were considered the most useful activities; (f) with regard to training methods, the trainees preferred the small group discussion followed by film viewing, open forum, debate and lecture; and (g) the trainers or resource persons met the expectation of the trainees. The most frequently-mentioned recommendations which the trainees gave to the management were to conduct more training on the application of process approach and practice teaching/peer teaching/demonstration teaching on population education as they found these inadequately taken up during the training programme.

8. One study which assessed the level of incoming knowledge on population education and the general training needs of the various types of personnel showed the following findings: (a) managers and supervisors were more knowledgeable about the population education curriculum and content than the teachers but both expressed the desire for more training in this area; (b) teachers and managers had adequate knowledge of the methods and strategies used in population education but both groups still expressed interest in

receiving more training; (c) teachers had a higher knowledge of the evaluation and analysis of data than the managers but both expressed the desire for further training; (d) managers had a higher knowledge of the different management functions than the teachers and both groups expressed interest to learn more about the subject; (e) managers had higher knowledge than the teachers about the available population education materials.

9. What are the ex-trainees doing long after attending training programmes on population education? One study from Thailand showed that the majority were conducting a number of population education activities such as teaching. Attendance at training programmes had given them the recognition among their peers and superiors in the schools and offices where they worked. Although the ex-trainees found the objectives and the contents of the training programme useful to their population education activities, most of them found it necessary to equip and update themselves with more knowledge of population education content and processes through self-study. However, a number of the ex-trainees admitted that they had not successfully undertaken any population education activities because of the following reasons: (a) their jobs provided only moderate opportunity for conducting population education activities; and (b) there were problems such as financial constraints, lack of time, the non-co-operation of colleagues and lack of facilities.

Summary of research trends and implications

By and large, the training programmes on population education in the countries have been effective in increasing the trainees' knowledge about population education and changing their attitudes more favourably towards population issues. However, these findings were mostly the results of the pre- and post-tests administered on the trainees right after the training programme had been undertaken. What is significant is the fact that many of these teachers were not able to use their newly-acquired knowledge immediately because of the gap between the time the training was completed and the time they found the opportunity to teach the subject, if at all. More often than not, the unused knowledge and skills have led to disintegration making it difficult for teachers to teach the subject at a later date. Therefore, what is crucial in this issue is not only the question of whether the training programmes had been successful in developing or upgrading the knowledge and attitude of the trainees towards population education but whether they have really helped teachers in teaching population education effectively in the schools or not. No real systematic studies have yet been undertaken to correlate the effectiveness of the teaching of population education with the training programme received. In addition to this, more follow-up studies should be made after the training to monitor the population education activities of the trainees.

Also, a few variables may have to be looked into more closely as they pose a challenge to the effectiveness of the training programmes. The first variable pertains to the previous exposure of trainees to other meetings, mass media, and other sources which accounted for the high level of knowledge and desirable attitude which they already possessed even before they underwent training. If the trainees' knowledge is already being improved and upgraded by other sources, is there a real need for training programmes? What particular subjects or information are being derived from these other sources? By knowing them, the topics or information that are being received from other sources should not be taken up again in the training programmes to avoid duplication of content. It will also make the duration of the training shorter, focusing only on the necessary topics, thereby promoting a more cost-effective training programme.

The second point is that both the trained and untrained teachers in one country have been found to be equally effective in teaching population education with the use of the prepared curriculum guides. This raises an issue of whether face-to-face training programmes which are usually expensive and time-consuming are really the best means of training teachers and other personnel. Would other types of training such as self-study/instructional materials be equally effective and less expensive than the face-to-face modality?

A corollary to this issue is the question: What is the most effective and feasible training model for delivering population content and methodology which can achieve the objectives of increasing the teachers' knowledge, changing their attitudes and making them competent in teaching population education? This training model should be the most economic and administratively feasible among them all, while not sacrificing the quality of training within financial, physical and systems constraints. So far, no country in Asia has undertaken a comprehensive comparative study using an experimental design. Even if some countries like the Philippines have tried several types of training models from heirarchical face-to-face to peer training and the self-instructional modules, there has been no systematic documentation analysis existing to compare these three models in terms of objectives and cost effectiveness.

B. Exemplary studies

BANGLADESH

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Ministry of Education and Religious Affairs (Education Division). Population Education Programme. *Evaluation of training workshop of different levels of teachers.* Dhaka, 1979. 32 p.

OBJECTIVES

1. To assess the knowledge base of the participants, i.e., key personnel, college teachers, headmasters and Thana education officers and primary school teachers, on the different aspects of the population problems and issues prior to their exposure to the workshops.

2. To assess the attitude of the participants towards population-related matters and population education prior to their exposure to the workshops.

3. To determine the gain in knowledge and change of attitude of participants regarding population-related matters and population education after their exposure to the workshops.

METHODOLOGY

Sample: Four groups of population education personnel. The first group consisted of the key personnel which included the officers of the Population Education Programme, field level Educational Administrators and Supervisors, heads and faculty members of higher institutions of learning. The second group consisted of college teachers who participated in three workshops; the third group included 8,000 Headmasters and 420 Thana Education Officers who attended 57 workshops; the fourth group consisted of primary school teachers who participated in 57 workshops.

Data collection and analysis technique: Two various sets of questionnaires. One set contained multiple choice to determine knowledge and another set was Likert type test to determine attitude. The same set of questionnaires were administered before and after the training workshop. The number of test items differed for the various groups of respondents. The data were analysed by determining the frequency distribution and the distribution of the mean scores.

FINDINGS

1. Knowledge test

a) There was a significant positive change in the knowledge of the key personnel after the workshop but the level of change was less than what was expected for that category of participants. This was explained by the fact that the participants sent were the wrong persons, were not sold on the idea of population education and were near retirement age.

b) The average post-test scores of the college teachers as compared to their average pre-test scores were not very high. However, the scores of the pre-test showed that the college teachers already had a high and substantial knowledge base about population problems, issues and population education to start with.

c) The pre- and post-test scores of the headmasters and the Thana Education Officers showed a substantial and positive change in knowledge base. However, their pre-test scores also showed a high level of incoming knowledge.

d) Although the primary teachers showed a substantial knowledge base about population before the workshop, the post-test showed a very high change in knowledge after the workshop.

2. Attitude test

a) There was no significant change in the attitude in the key personnel after the workshop

due to the fact that there were quite a number of aged and conservative participants among this group. However, generally the pre-test questionnaire showed a favourable attitude toward population education.

b) The pre-test score on the attitude of the college teachers towards population was very high indicating a very favourable attitude. However, there was a slight lowering of the mean gain score after the workshop. This was explained by the fact that the increase in knowledge base brought about a slight negative change in the attitude.

c) The headmasters and the Thana Education Officers already had a very favourable attitude towards population before the workshop. As a result of their participation in the workshops, their attitude changed positively.

d) The primary school teachers initially had a favourable attitude towards population issues. As a result of the workshop there was a substantial and favourable change in attitude.

e) Despite the short duration of the workshops, the test results substantiate the proposition that changes in the knowledge base are capable of bringing about corresponding changes in attitude.

DESCRIPTORS: *Teacher Training; Educational Personnel Training; Attitudes; Attitude Change; Bangladesh.*

SOURCE: Executive Director
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Ministry of Education and Religious Affairs (Education Division)
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Dhanmondi R.A.
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INDIA

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Ramachandran. *A study of knowledge and attitude of teachers of Kurnool toward population education.* Tirupati, Population Study Centre, S.V. University, 1974.

OBJECTIVES

To find out the knowledge and attitude of teachers of Kurnool towards population education.

METHODOLOGY

Sample: 200 teachers of Kurnool district who were mostly lecturers.

Data collection and analysis techniques: (a) Orientation training course in population education; (b) Questionnaire; and (c) Post-tests.

FINDINGS

1. At the beginning of the course 40 per cent of the participants were not aware of the meaning of population education. At the end of the course most of them had better concept of population education.

2. In the pre-test, 40 per cent considered the population awareness programme as a part of family planning propaganda. In the final test about 80 per cent considered that population awareness is also a part of population education.

3. Whereas in the pre-test only 25 per cent of the participants could trace the relationship of family, food and nutrition, and planned parenthood to population education, in the post-test more than 75 per cent could adequately explain the relationship.

4. Before the course, about 60 per cent considered that family planning and population education were one and the same. But after the course, most considered that family planning and population education were not one and the same.

5. In the pre-test, 20 per cent of the participants disagreed that the size of the family cannot be controlled by human beings. In the post-test most of them thought that the size of the family can be controlled.

6. In the pre-test, 50 per cent considered that there was no proper environment in schools and colleges for creating population awareness among students. In the pre-test, more than 70 per cent considered that it was possible to create awareness of population problem in the students by a programme of lecture by experts and by organizing film shows and exhibition.

7. About 65 per cent of the participants considered late marriage as one of the methods for controlling the family size.

8. The majority, both in the pre-test and post-test, agreed that over-population leads to economic and social instability in the country.

9. The majority of the participants, both in the pre-test and post-test, agreed that it was necessary for the country to check its population growth and to impart knowledge on human reproduction and nutrition to the masses.

10. The majority considered that a small family was conducive to higher standard of living and that population education was necessary for developing responsible parenthood among the youth.

11. All agreed that spacing of child births was necessary for the health of the mother and for the health and happiness of children.

12. Both in the pre- and post-tests, there was agreement that sex education in the context of population was necessary to eliminate some mis-conceptions about human reproduction in the younger generation.

DESCRIPTORS: *Teacher Attitudes; Attitude Change; India.*

SOURCE: Head
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New Delhi-110016
India

PHILIPPINES

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Ministry of Education, Culture and Sports. Population Education Program. *Evaluation of the training program for the first supervisory training team (STT).* Manila, 1973. 67 p. mimeo.

OBJECTIVES

To determine:

1. What the participants thought were the main objectives of the training programme and to what extent they were achieved.

2. Which instructional procedures the participants preferred.

3. How effective the training staff members and resource persons were as instructors.

4. How the participants perceived their roles in the training programme.

5. To what extent the participants' priority needs were identified, emphasized and met.

6. To what extent participants gained competence in the use of the discovery approach and other teaching techniques.

7. To what extent participants were prepared to train teachers to use newly-developed curriculum materials in population education.

8. To what extent participants gained population knowledges, attitudes and practices (KAP) and how significant these gains were, if any.

9. The effectiveness of the general management of the training programme.

10. The effectiveness of the evaluation and the total training programme.

METHODOLOGY

Sample: 50 academic, division and district supervisors, division co-ordinators, elementary school principals, teacher-nurses, regional superintendents who are in-charge of health, science, social studies, mathematics and home economics were sampled from 17 provinces all over the Philippines.

Data collection and analysis techniques: Formative and summative evaluation. The evaluative instruments included: (a) a check list to survey understanding of objectives, priority needs, role expectations and procedural suggestions; (b) a test on population KAP; and (c) a final evaluation questionnaire to determine the achievement of objectives and management. Frequency distribution and t-tests were used to analyse the data gathered.

FINDINGS

1. The participants had an increased understanding of the main objectives of the training programme as the training period went on. The first three of the following main objectives were considered completely achieved and the rest for the most part achieved: (a) to analyse and explain the population situation at macro and micro levels; (b) to explain the dynamics of population education; (c) to exchange ideas on population education; (d) to analyse values of attitudes

regarding population education; (e) to use effectively the discovery approach and other teaching techniques; and (f) to train teachers to use the newly-developed PEP curriculum materials in population education.

2. The participants preferred the following training procedures in this order: small group discussion, film viewing, open forum/panel discussion/debate, lecture, demonstration teaching, simulated/real class activities and school/clinic visitation.

3. Almost all of the resource persons and majority of the training staff members were considered superior instructors.

4. The pre-test results showed that the trainees already had a relatively rich baseline and sufficient background with regard to teacher's role or expectations. This may have been due to the fact that 60 per cent of the trainees had attended previous conferences, seminars or meetings in family planning and population education. At the end of the training period, the trainees showed improvement in the various instructional competencies such as selecting, adapting and using methods of instruction and materials of instruction and diagnosing and meeting teacher needs, making them almost ready to teach population education.

5. The participants had high priority needs for each of the instructional components of the training programme. Such high priority needs were adequately met except for practice teaching/peer teaching/ demonstration teaching.

6. The majority of the trainees felt at home with varied teaching procedures but expressed a need for more competencies, theoretical and practical, in the application of the process approach in population education.

7. To some extent, the trainees were prepared to train teachers to use the newly-developed curriculum materials in population education. There was a felt need for more practice teaching/peer teaching/ demonstration.

8. The trainees had small but significant gains on population knowledge, no real changes in attitudes and inconsistent changes in practices. Although there was gain in knowledge, the magnitude did not seem to indicate an impressive growth within a six-week period. The reasons speculated for this include the following: (a) test items may be rather difficult; (b) the training programme emphasis on the process approach distracted the trainees' attention from the content; or (c) there was so much subject matter covered in so short a time; and (d) the trainees may have had difficulty in recalling facts as most of them were middle aged. The trainees agreed that there are dangers in rapid population growth and that there should be population policies, but they felt that the government should not dictate family size.

9. The relevance of instruction to the participants' needs and the sequence of instructional topics were considered excellent. Instructional materials, resource speakers, staff instructors and participant listening/assimilation/participation were all appraised as excellent.

10. The amount of time devoted to various aspects of the training programme was considered about right by the trainees.

11. The trainees recommended more sessions on the process approach and more opportunities for practice teaching, peer teaching and demonstration teaching.

DESCRIPTORS: *Training Programme Evaluation; Supervisors; Philippines.*

SOURCE: Chief
Population Education Program
Ministry of Education,
Culture and Sports
Arroceros Street
Manila, Philippines

PHILIPPINES

48

Ministry of Education, Culture and Sports. Population Education Program. *A two-phase study of the training programme on population education for elementary school teachers*. Manila, 1973. 20 p. mimeo.

OBJECTIVES

To determine:

1. Whether the objectives of the training programme were realized.

2. Whether the attainment of the objectives fulfilled the needs of the participants.

3. What topics/activities were considered most useful by the trainees, what topics/activities should have been left out and what other topics should have been included?

4. Whether the presentations were stimulating and easy to understand.

5. Whether the instructional materials were adequate and effective.

6. Whether there was adequate time allotted for the training programme.

7. Whether there was a significant difference in the means of the scores in the pre-test and post-test.

METHODOLOGY

Sample: 600 selected health, home economics, mathematics, science and social studies school teachers from grades I to VI from selected districts in the divisions of five provinces in the Philippines.

Data collection and analysis technique: Pre- and post-test questionnaires. The data were subjected to frequency distribution and t-tests.

FINDINGS

1. Sixty-seven per cent of the trainees claimed that the objectives of the training programme were realized.

2. A great majority felt that the attainment of the objectives fulfilled their needs.

3. Family planning was considered to be the most useful topic by the majority of the participants followed by effects of rapid population growth and demography. The discussion and demonstration of subunits were the most useful activities.

4. Most said that none of the topics discussed in the training programme should be deleted. A few believed that demographic exercises and the discussion on the advantages of big families should have been left out. Only two of the trainees suggested that the following topics should be included: (a) birth rates in different occupational groups; (b) urban-rural differences in fertility behaviour; (c) interpretation of statistical data; (d) side effects of contraceptives; and (e) curbing immorality.

5. A great majority of the trainees found the presentation of topics stimulating and easy to understand.

6. The majority found the instructional materials adequate and effective.

7. More than 50 per cent found the time allotted for the training programme sufficient. The rest suggested lengthening the training from one to two weeks.

8. There was a significant difference between the pre- and post-tests at one per cent level, hence the one-week training programme brought about significant changes in knowledge of population matters.

DESCRIPTORS: *Training Programme Evaluation; Primary Teacher Training; Philippines.*

SOURCE: Chief
Population Education Program
Ministry of Education,
Culture and Sports
Arroceros Street
Manila, Philippines

PHILIPPINES

49

West Visayas State College.
Population Center for Training and Research. *Training needs assessment survey in Western Visayas Region VI.* Iloilo (Philippines) /1978/. 10 p.

OBJECTIVES

1. To identify the training needs of the secondary school teachers, population education trainers, non-formal education supervisors and co-ordinators in Western Visayas regarding content, strategies, evaluation, training management and materials.

2. To identify the level of competence with regard to content, strategies, evaluation, training management and materials between the public and private secondary school teachers who have had training and those without training.

3. To determine whether they need more training in these areas.

METHODOLOGY

Sample: 249 secondary school teachers in public and private schools, 19 Population education trainers and five non-formal education supervisors and co-ordinators in Western Visayas, Region VI. Sampling made use of the multistage method. The first stage was the random selection of 50 per cent of the divisions covering seven divisions. The second stage was the random selection of 50 per cent of the division population education trainers and a 4 per cent sample of the public and private secondary school teachers in the Region. The third stage was the random selection

of 50 per cent of the regional population education trainers and all of the regional and non-formal education division supervisors.

Data collection and analysis technique: Questionnaire checklist to gather data on the (a) perceived level of competence of the subjects; and (b) their desire for training relative to content, strategies, evaluation, training management and materials. The analysis of the data was based on frequencies and/or percentages. The model response was based on the interpretation of results.

FINDINGS

1. The managerial group had more knowledge of population education curriculum and content than the teachers, who showed little competence. Teachers showed the least competence. Both indicated a desire for training in this area.

2. The managerial group knew more about methods and strategies in population education than the teachers. As a whole, the teachers perceived themselves adequate in their competence but between the public and private school teachers, the public school teachers perceived themselves more adequate than did their private school counterparts. All the respondents, though they felt 'adequate' or 'fully adequate' in strategies and methods, expressed the need for more training in this area.

3. The teachers taken as a group knew more about evaluation and analysis of the data than the managerial group. The managerial group were more competent in only 'knowledge of the criteria in selecting tests' and 'knowledge of how to administer tests'. Both groups indicated little competence in 'knowledge on preparing table of specifications'. Both groups unanimously desired further training in this area.

4. The managerial group knew the most about management functions in all six areas of management. The teacher group showed competence only in the 'delegation of responsibility' and 'co-ordination'. Both needed more training on this area.

5. The teachers with training, indicated that they knew nothing about population materials in contrast with those without training who stated they knew a little. The managerial groups' modal response regarding its competence in this area was 'adequate'. Both expressed a desire for more training.

6. The teachers with training considered all the materials listed of secondary priority. Those without training, considered these items of first priority. These items include: guides in mathematics and science, population projections in charts and tables, wall charts on reproduction, working models of the reproductive organs and contraceptives. The managerial group considered the following materials as first priority: teacher's guide, student references, wall charts of demography and female reproductive system.

7. Although, as a whole, the teachers stated that most of the population materials listed were available in their schools, there were some which were not available. The following items were not found available in their schools: pro-

jected materials and graphs, charts and tables.

DESCRIPTORS: *Training Needs; Secondary Teacher Training; Teacher Trainers; Philippines.*

SOURCE: Population Center for Training and Research
West Visayas State College
Iloilo City
Philippines

THAILAND

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Mahidol University. Population Education Project. *Reports of the 6th, 7th, 9th and 10th Training Programmes on Population Education*, Chonburi, Thailand, 1977-79. Bangkok, 1977-79, 4 vols.

OBJECTIVES

To determine increase in knowledge and change in attitude among the trainees after they have received training in population education.

METHODOLOGY

Sample: All the trainees who attended the sixth, seventh, ninth and tenth training programmes held by Mahidol University. Personnel from the Teacher Training Department, Department of General Education, Physical Education Department, Educational Techniques Department, the office of the University Affair, Ministry of the Interior, Ministry of Public Health, Vocational Education Department and Ministry of Agriculture and Co-operatives. Each training programme was attended by, from 34 to 40 participants.

Data collection and analysis technique: Pre- and post-test questionnaires in two parts: (a) multiple-choice type questions to measure knowledge; and (b) five-scale scoring system used to measure attitude. Frequency distribution and t-tests were used to analyse the data and determine the level of significance for mean scores.

FINDINGS

1. Level of change in knowledge

The trainees from the four training programmes gained more knowledge during the training. The difference between the pre- and the post-tests was statistically significant at .01 level.

2. Findings on attitude

a) The trainees of the sixth training programme had the same level of desirable attitude before and after the training programme. However, after the training programme, the number of respondents who agreed that population education cannot solve the problems related to rapid population growth decreased as did the number of respondents who agreed that population education was an unnecessary burden to the teachers and students.

b) The trainees of the seventh training programme had the same level of attitude before and after the training programme. A large majority agreed that there is a population problem in the country and that it should be solved.

c) The ninth training programme increased all the more the already highly desirable attitudes of the trainees. It was believed that the trainees had been exposed before and were aware of the population problems in Thailand and the need to solve this problem. The more favourable change of attitude after the training programme showed that with the gain in more correct knowledge, old beliefs and wrong attitudes were also corrected.

d) The trainees of the tenth training programme had high positive attitude towards population education. They agreed on most of the positive statements and disagreed with the negative statements. However, they did not accept direct advertising of birth control methods and neither accepted nor rejected the two or small family size norm since they thought that the decision should be influenced by a variety of factors.

DESCRIPTORS: *Teacher Training; Educational Personnel Training; Attitudes; Attitude Change; Population Awareness; Thailand.*

SOURCE: Director
Population Education Project
Faculty of Social Science and Humanities
Mahidol University
25/25 Moo 5
Tambon Salaya, Amphor Nakorn Chaisri
Nakorn Pathom, Thailand

THAILAND

51

Nawarat Phlainoi. *Follow-up study of the participants in the First to Fifth Intensive Training Programmes on Population Education organized by the Mahidol University Population Education Project.* M.A. thesis, Mahidol University, 1978. In Thai with English abstract.

OBJECTIVES

1. To find out the participants' activities concerning population education receiving the Intensive Training Course on Population Education from the Mahidol University Population Education Project, in order to make a conclusion about the success of the training objectives.

2. To study the participants' opinions concerning the problems of organizing population education activities and the ways they solved the problems.

3. To gather suggestions from the participants for the improvement of population education activities.

METHODOLOGY

Sample: 155 randomly sampled former trainees.

Data collection and analysis technique: Questionnaires, mailed to the sampled participants. About 92 per cent of the questionnaires were returned.

FINDINGS

1. The majority of the participants had conducted many population education activities after receiving the training, and most of them had plans to conduct more population education activities next year.

2. They indicated that the major problems and barriers which they met in organizing population education activities were shortage of funds, time, colleagues, equipment and facilities. The most effective ways of solving these problems were to equip themselves with more knowledge regarding population education content and processes and establish better relationships with other people concerned.

3. After receiving the training, most of the participants received more recognition concerning population education from their headmasters and colleagues and they felt that the population education training programmes helped their professional advancement.

4. Most types of the participants' jobs provided a moderate opportunity for population education activities and there was also a moderate relationship between population education and their jobs.

5. Most indicated that the training objectives were very useful and feasible and the majority had performed population education activities successfully in accordance with the training objectives.

6. In the same way, the content and the processes of the training were useful for organizing population education activities.

7. All of the training facilities which the Mahidol University Population Education Project provided such as the resource persons, per diems and accommodation, contributed successfully to the achievement of the training objectives.

8. Most of the participants felt that they received enough experiences to operate population education activities in their organizations and they were willing to attend the refresher programmes in population education again (if any).

9. Most were trying to update themselves in population education by studying from the books.

10. Most of them confirmed that the Mahidol University Population Education Project was ready to organize training programmes on population education.

DESCRIPTORS: *Follow-up Studies; Trainees; Thailand.*

SOURCE: Director
Population Education Project
Faculty of Social Science
and Humanities
Mahidol University
25/25 Moo 5
Tambon Salaya
Amphor Nakorn Chaisri
Nakorn Pathom
Thailand

C. Other studies

PHILIPPINES

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Ministry of Education, Culture and Sports. Population Education Program. *Performance of the trained and untrained teachers in teaching population education in the division of Batangas City.* Manila, 1977.

OBJECTIVES

The study aimed to compare the performance of trained and untrained teachers in teaching population education in the elementary grades.

METHODOLOGY

Sample: Experimental approach equated 19 pairs of Grade II to Grade VI teachers on the basis of the following variables: population education training, average performance for the past three years, sex, subject and grade level taught and years of experience. The classes of pupils were compared using the Otis Lenon Mental Ability Test to the primary grades and form G for the intermediate pupils.

Data collection and analysis technique: Through achievement tests, teachers log books, and record of observations.

FINDINGS

Teachers who have not attended the PEP training programme could teach the subjects (mathematics, social studies, science, health, and home economics) as effectively as the trained teachers with the use of the PEP curriculum guides.

DESCRIPTORS: *Teacher Evaluation; Primary School Teachers; Philippines.*

SOURCE: Chief
Population Education Program
Ministry of Education,
Culture and Sports
Arroceros Street
Manila
Philippines

PHILIPPINES

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Ministry of Education, Culture and Sports. Population Education Program. *Procedures in the evaluation of training patterns.* Manila, 1974.

OBJECTIVES

The project aimed to:

1. Draw up a training scheme that was expected to produce over 200,000 trained teachers who can teach population education nation-wide by 1977;

2. Emphasize the need for periodic assessment of accomplishments;

3. Determine how closely actual activities adhere to the scheme; and

4. Gather immediate feedback that may be used in revising and improving future training programmes.

METHODOLOGY

Sample: District supervisors, department heads of secondary schools, elementary and secondary school teachers, and college instructors. PEP had conducted a number of five-week training programmes for three

types of participants: (a) division supervisors, (b) heads of secondary schools, and (c) college instructors in groups of 50. The division supervisors in terms of two (called the Supervisory Training Teams or STTs) then conducted a series of week-long training programmes in their respective division for elementary school teachers. A similar training pattern was also conducted among the secondary department heads on their teachers. The college instructors attended to provide pre-service training in the form of population courses for students of educational liberal arts.

Data collection and analysis technique: All the training programme of PEP had a built-in evaluation system that enabled the trainers to assess the different aspects of the course. A pre-test consisting of items on population knowledge and attitudes was administered to gather information on the extent of the participants' knowledge of content. A similar post-test was administered at the end of the course. Aside from the pre-test, post-test, a steering committee, composed of selected participants and the training staff of each training programme, met regularly to discuss the different activities that had taken place in the training course to identify certain weaknesses perceived in the programme and suggest revision to be implemented immediately. An evaluation sheet with a series of open-ended questions was also administered towards the end of the training session. The items in the evaluation sheet included degree of attainment of programme objectives, methodology, materials and facilities, trainers and participants and solicited suggestions from participants for improving future training programmes. While the training programmeswas going on, the trainers conducted informal evaluation. Observations were made on the proceedings of the training sessions paying special attention to those elements that could not be measured quantitatively.

FINDINGS

1. Evaluation of the First STT Training Programme. The First STT Training Programme was of particular significance because it marked the start of a series of PEP training activities that could continue for five years, at least, and hopefully, would extend beyond that period. Changes in the training scheme that evaluation revealed to be or priority were carried out in the succeeding training programmes. These included: reducing the training period from six weeks to five weeks; reducing the number of resource speakers; revising the training schedule based on observations of both participants and training staff regarding sequencing to topics and other priority considerations having reference to programme content; and designing a more or less standardized procedure for built-in evaluation of further STT Training Programmes.

2. Two-phased study of the one-week training programme for elementary school teachers. The two-phased study involved trying out the scheme for the week-long training programme for elementary school teachers which was devised by PEP training staff in co-operation with the participants at the First STT Training Programme. The tryout was conducted in five selected divisions - Rizal, Cavite, Batangas, Cebu, and Davao with an equal number of Supervisory Training Teams (involv-

ing a total of ten participants from the First STT Training Programm) as trainers. The first phase consisted of conducting the designed one-week programme in one district of each of the five divisions simultaneously, according to a uniform plan of lessons and activities. Immediately after the tryout, all ten trainers met with PEP staff to draw up a revised scheme based on the results of the tryout. Phase II of the study involved the trainers in trying out the revised scheme in differnt districts of the same divisions involved in Phase I. A total assessment of the tryout became the basis for laying out the scheme for the one-week training programme for elementary school teachers that is at present being implemented by PEP-trained STTs in different divisions of the country.

3. Pilot study of the one-week training programme for secondary school teachers. The pilot study aimed to evaluate the training programme and, in the process, gather data that would serve as guidelines for its improvement. It was conducted in six regional centres - Manila, San Fernando, Pampanga; San Fernando, La Union, Naga City; Cebu City and Cagayan de Oro City - by six teams of two secondary department heads who had gone through the five-week training programme at PEP. The first phase of the study involved simultaneous tryouts of the training programme in the selected regional centres, following the design of the Phase I tryout of the training programme for elementary school teachers. The resulting feedback became the basis for setting up a design for further evaluation that would be conducted as Phase II of the study.

The second phase of the evaluation was directed at pinpointing areas of weakness and determining alternative strategies that would strengthen the programme structure. A second tryout of the training programme for secondary school teachers was conducted in the same regional centres under an experimental set-up that would test the relative effectiveness of teams of two, compared with teams of four, trainers, handling classes of 49 and 80, respectively, so that there would be a common ratio of one trainer to 20 participants. Problems encountered earlier relative to the availability of secondary department heads as trainers of secondary school teachers became the basis for trying out, additionally, a strategy using elementary STTs to train secondary school teachers to find out if they could be as effective trainers at this level as secondary department heads. The week-long session that took place immediately after the tryouts was a series of detailed discussions among PEP staff and the tryout trainers on the different aspects of the training programme - quality of materials, class size, facilities, the time element, and administrative problems. These evaluation sessions proved to be of value, not only for the improvement of the secondary school teachers training programme (further implementation of which has been temporarily postponed until it can be thoroughly revised according to the recommendations and suggestions evolved at the session) but for mapping out new strategies for other PEP training programmes as well. Among the more concrete outcomes of the evaluation has been the development of a Trainers' Manual designed to supplement the actual training the teacher has undergone at PEP.

DESCRIPTORS: *Training Programme Evaluation; Philippines*

SOURCE: Chief
Population Education Program
Ministry of Education, Culture and Sports
Arroceros Street
Manila, Philippines

Section Three

EVALUATING CURRICULUM AND MATERIALS DEVELOPMENT

Section Three

EVALUATING CURRICULUM AND MATERIALS DEVELOPMENT

A. Analysis of the studies

The introduction of population education into the school curriculum has not been an easy task. Population education, being of recent origin has no clearly marked content boundaries. It is inter-disciplinary in nature and related to various subjects. Generally, population education is introduced into the school curriculum by the integration of contents drawn from demography, population studies and other population related subjects with such disciplines as health education, home economics, mathematics, social studies and the natural sciences, especially biology. China and Thailand constitute important exceptions in this regard where they chose to introduce it as a separate subject.

There are three main approaches adopted for introducing population education in the countries, namely, infusion, integration and later as a separate subject. The infusion approach is more of a temporary arrangement whereby population-related examples are substituted in existing materials. Integration, on the other hand, makes for a more systematic incorporation of relevant population elements into the syllabuses, a process whereby specialists in different school subjects, population education and curriculum development need to work together. To ensure logical integration and enrichment two pre-requisites are required. They are a full grasp of the different population concepts to integrate and a thorough knowledge of the content coverage or the scope and sequence of the discipline to be enriched or in which to integrate.

Countries usually begin the process of curriculum development by making a survey of the population-related content already existing in syllabuses or textbooks. The studies are aimed at finding out to what extent population content already exists in the textbooks, whether it has been treated in a casual or systematic manner, whether its presentation is anti-natal, pro-natal or neutral. The results are used as a basis for preparing the scope and sequence and as plug-in points for the population content. Some countries also undertake workshops and seminars among curriculum developers to identify the content to be included in the subject areas. Oftentimes, it is based on a consensus of opinions and no hard research or evaluation dealing with the placement of topics is undertaken. Generally, the curriculum materials in the region include a rationale and general and specific objectives or expected learning outcomes. The concepts are often well articulated in their horizontal and vertical sequence. They also suggest teaching-learning situations and activities followed by a few evaluation or test items. However, the curriculum materials developed and prepared in these seminars and workshops were not often found acceptable by the persons or units in charge of the total curriculum at a given stage of education or schooling. The main reason for this

is that the existing curriculum is already overloaded. Consequently, only very few population education topics find their way into the textbooks and they are often too thinly spread to register any impact on students. This has led a few countries to incorporate larger or more identifiable chunks of population education into one or two subjects. Because of this problem, the question of developing a minimum and adequate learning requirement that can be broadly recommended at various stages of schooling comes up. This should help to cover all essential elements on the one hand and yet ensure that such a curriculum would be kept within the feasible limits as regard the quality of content, on the other.

Another approach suggested to ensure that population contents are integrated with the subjects is to include them in the textbooks of different subjects at different levels. But this is easier said than done because one has to wait until textbooks are revised to be able to incorporate population education contents; and most of all textbook authors are not always knowledgeable about population education. The countries then resort to the development of supplementary reading materials for use by the teachers and the pupils.

Very few research and evaluation studies had been done by the countries to determine the effectiveness of the developed curriculum materials and other supplementary and reference materials. Of the 15 studies, seven came from Thailand, four from Korea, two from the Philippines, one from Bangladesh and one from Unesco. Most of these studies evaluate the effectiveness, acceptability and feasibility of the implementation of the curriculum or lesson, subject areas where population education has been integrated. To do this curriculum developers usually convened a meeting to design and develop draft curriculum materials on population education. These draft materials were pretested on a small sample of users. Once they were revised, they were tried out in an actual classroom situation. The effectiveness of the population education curriculum units was determined by measuring changes in the knowledge and attitude of students. The effectiveness of the materials, especially factors contributing to the teachability, was also determined through a survey of teachers' reactions and comments, using questionnaires and interviews. These included such questions as: are the objectives, content, style and format highly appropriate for classroom implementation? Are the selected contents relevant to the children? Are the objectives clear, appropriate and applicable? Are there enough reference and supplementary materials to aid teaching? Another method which some countries, like the Philippines followed is by asking a panel of experts and subject specialists to comment and critique on the materials. For example, subject specialists and experts on home economics are asked to comment on the population education units for integration with home economics and so forth.

This section also includes five studies which analysed the content of textbooks in order to identify topics related to population matters which can be used as plug-in points for population topics. The following

questions are usually asked: to what extent are population topics included in the current textbooks? To what extent are the topics and sub-topics covered in each subject areas? How are the population topics treated in each book - systematic, semi-systematic, casual or non-systematic? How is the presentation of the population topics classified - pro-natal, anti-natal or neutral? Basically, the results of the content analysis provide baseline data for preparing the scope and sequence of the curriculum and to suggest how to develop the content and conceptual framework.

One study was undertaken by Unesco using nine countries from Asia as respondents to determine the feasibility of integrating population education contents with a curriculum area, i.e., home economics. The study surveyed the possible entry points in home economics with which population education contents can be integrated. Another study which has been included here but does not deal directly with curriculum materials is an evaluation of a newsletter. It has been included because newsletters can also be considered supplementary materials for teaching as they contain population education activities and teaching units for ready use by the teachers. Out of the 15 studies included here, nine are exemplary studies found in Section Two while six are included in Section Three.

This section deals with two types of samples - the textbooks and teaching units used for content analysis and the various personnel who were asked to react and comment on the different curriculum materials. The majority of the content analysis studies used most, if not all, of the textbooks used in both elementary and secondary schools across all the subject areas. A few focused only on textbooks used in certain grade levels. As for the sample respondents who reacted to the effectiveness and acceptability of the curriculum materials and teaching packages, certain sample groups were located in one specific school and classes where the teaching packages were tried out while some were selected from several schools in one province or one region. One was a nationwide sample of teachers selected through simple random procedures while the international study selected various types of personnel engaged in home economics from nine countries in Asia.

The instruments or tools used for gathering data were the pre- and post-tests to measure academic achievement resulting from the exposure to the curriculum units; survey questionnaires filled out by the teachers to evaluate the various components of the curriculum unit to find out their teachability and appropriateness; and content analysis to determine the existence of population content in the textbooks.

Based on an analysis of the 15 studies included in this section, the following generalizations can be made:

1. Topics concerning population issues occupied a relatively small portion of the existing textbooks in the schools. However, it should be noted that this finding is based on five surveys which were undertaken before or during the first stage of population education programmes when countries were just starting to undertake curriculum development programmes. The proportion of popu-

lation education topics ranged from 0.37 per cent to as much as one-third of the entire subjects studied.

2. Most often, these topics were treated in a simple and casual manner, meaning, that there was no careful and well thought-out plan undertaken to systematically inter-relate population content with the subject area content.

3. Social studies was the most frequently mentioned subject area which took up population content more extensively than the others.

4. The population topics which were most frequently taken up or treated more comprehensively than the others include the following: (a) population growth and natural resources; (b) demographic factors and data; (c) determinants of population growth; (d) man and the environment; and (e) facts of population phenomenon. On the other hand, the population topics which had been least dealt with consist of the following: (a) fertility; (b) sexuality; (c) study and understanding of population situations and problems and ways of solving these problems. However, an analysis of the population content in each subject area in the Philippines showed that fertility was mentioned in all the five subject areas which integrated population education; sexuality and reproduction were taken up in health and science; population concepts and demography were taken up in the five subjects while migration was taken up only in social studies.

5. Eight studies investigated whether the curriculum material or unit had contributed to changes in knowledge and attitude in the users and whether the various components had contributed to the successful implementation of the curriculum materials. The findings showed that:

a) Of three population education curriculum/teaching packages developed in Thailand and tried out in the classrooms, one was highly acceptable and met the standards set, the other two were not up to standard but were still useful and effective in teaching.

b) Two of three studies which dealt with changes in knowledge and attitude as a result of students' exposure to the curriculum showed a general increase in their knowledge. All three studies showed evidence of a positive change in attitude.

c) Two studies showed that the objectives in the population education curriculum unit did not match the content or were not stated in cognitive, affective and behavioural terms, while some were too ambitious. However, other studies showed that the majority of the teachers rated the objectives from average to highly appropriate, clear, suitable for the students' age, and appropriate to classroom teaching. The teachers felt that the most important objective of any curriculum should be the improvement of knowledge and comprehension about population education.

d) While three studies showed that the population content was not appropriate to the objectives and and the subject areas with which it was integrated, one study revealed that the content was very appropriate to classroom teaching. Two studies from the Philippines and Korea even identified topics which were not relevant, which should be revised

and added. However, there was a clear indication for a need to update data regularly and treat some topics more comprehensively.

e) There was a general consensus found in the studies that the time allotted to the implementation of the curriculum unit was too short and needed to be lengthened.

f) It was also found in almost all of the studies that the terminologies and language used were difficult to understand. Simplification was suggested.

g) There was a consensus about the inadequacy of exercises and activities in the classroom situation. Comments ranged from "there should be more detailed explanation to the teachers on how to carry out some activities"; to "if one activity is too difficult to do, alternative activities should be given.

h) The inadequacy of reference and teaching materials for the use of the pupils and the teachers was another common finding. If not all of the materials can be given, it was suggested that a comprehensive list of materials and suppliers should be given to the teachers.

i) Many curriculum materials lacked inquiry and discovery-oriented approaches. It was suggested that a summary of the various teaching methods should be given including an explanation of how each works.

6. One regional survey was undertaken of nine countries, i.e., India, Indonesia, Iran, Malaysia, the Philippines, the Republic of Korea, Singapore, Sri Lanka and Thailand, to determine the feasibility of introducing population education into home economics. The findings showed that: (a) home economics is rich with topics that can serve as entry points for population education; (b) there were two models of home economics - one involved housework, cookery and needlework for girls and the other, for boys and girls, involved skills such as decision-making, problem-solving, managerial skills and the sharing of responsibilities among the members of the family - this latter model can be used for integrating population education; (c) the following home economics topics were found to be good entry points: food and nutrition, clothing, home management, housing and family and child development; (d) the most frequently used methods were lecture and individual project - more problem-solving, discovery-oriented methods should be used; (e) teaching materials in home economics were scarce - more should be produced; and (f) more than half of the teachers of home economics were insufficiently trained - pre-service and in-service training should emphasize more on methodology.

7. Newsletters do not only serve as a medium for communicating news of activities of the population education programme but also serve as an educational medium by carrying actual lessons and teaching units for the ready use of teachers. A study which has been conducted to evaluate the usefulness of the population education newsletter in Bangladesh showed that the target users did not regularly receive it. But those who received the material stated that its objectives of informing, motivating and stimulating teachers to continue

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to give emphasis to population education in the classroom has been achieved. They said that the newsletter had been useful for classroom teaching especially with discussion among students. They suggested that more articles on family planning, population news and demographic data of other countries be included in the newsletter.

Summary of research trends and implications

Most of the content analyses were undertaken before or during the first phase of each country's population education programme. They were basically aimed at identifying entry or plug-in points for population education content. It is still uncertain whether countries then systematically went ahead and introduced population education content. No follow-up research has been done so far to again analyse the contents of the textbooks to find out whether population content is included. It would be timely to find out how much space has been allotted to population education content, and in which subject areas/disciplines it has been included; and more importantly whether the contents have been sufficiently highlighted to register an impact on the students. It would also be useful to find out whether the methodologies appropriate for teaching population education content are compatible with those used in the textbooks.

An analysis of the studies also revealed a conspicuous lack of the baseline research needed to use as a basis for curriculum and materials development. Many curriculum materials were developed without the benefit of first finding out the level of students' knowledge, content needs, their readiness to receive certain population topics, the appropriateness of contents and methodologies to students' age and maturity and the level of difficulty of language. More often the practice was to develop the materials during a workshop and pre-test their acceptability on a small sample. Before curriculum materials are developed, countries find it advisable to conduct baseline surveys of their users' needs and readiness. Moreover, once the trial editions of the materials are prepared, it is more scientific to test them on a larger sample of actual users, preferably using different approaches of presentation or treatment. This gives a better overall view of their effectiveness.

The studies included in this section also show the absence of any evaluation of supplementary and reference materials such as pupils' and teachers guides and handbooks. There seems to be a felt need for countries to automatically undertake regular pre-testing of both their curriculum and supplementary materials. The studies should focus on such aspects as the relevance and appropriateness of content and objectives, time allocation, the implementation of suggested teaching methodologies, relevance and applicability of classroom exercises and activities, comprehension of language and terminologies used and the like.

Lastly, the most crucial issue with regard to research on curriculum development at present is to identify and develop a minimum and adequate learning requirement or a core of population education content that can be broadly recommended at

various school levels, for various subjects. A baseline study of what is considered a minimum core of population education content based on the needs of the students at the different school levels must be undertaken, followed by an actual tryout of these packages in the classroom to determine their viability and acceptability.

B. Exemplary studies

BANGLADESH

54

Ministry of Education and Religious Affairs (Education Division). *Evaluation survey on Population Education Bulletin.* Dhaka, 1981. 18 p.

OBJECTIVES

1. To find out whether the PEP Bulletin regularly reaches its target-group.

2. To ascertain whether the Bulletin serves its intended purpose.

METHODOLOGIES

Sample: Random sampling of educators of different institutions and teachers of primary, secondary and tertiary levels who have participated in the PEP training workshops, classified into four groups: key personnel, college teachers, secondary school teachers and primary school teachers. From each group 10 per cent of the readers were chosen randomly. Of 2,300 readers selected, only 562 responses were received.

Data collection and analysis technique: Questionnaire containing 12 items designed to collect specific information about the number of issues received by the readers, effectiveness of the Bulletin and readers' suggestions for further development of various topics.

FINDINGS

1. The Bulletin is not regularly received by former participants of the PEP workshops; 36 per cent stated that they had not received a single issue; only 15 per cent had received four or more issues. Primary school teachers received fewer issues than any category of trained persons.

2. Bulletin articles are read attentively by all respondents. Most readers pass the Bulletin on to their colleagues. This implies that circulation is doubled or tripled.

3. The majority of readers would like to see more articles about population control and religion. Over half also want articles on family planning, population news and demographic data of other countries.

4. Many stated that the Bulletin is useful to them in their personal life and in classroom teaching. Through it, they become better informed. Their understanding of the population problem is enhanced. Many of the readers discuss population issues and family planning with their families, neighbours, colleagues and in their community.

5. Many teachers said they discussed the population problem with their students and that the Bulletin articles helped them to do so.

6. The Bulletin appears to serve its purpose, it informs, motivates and

stimulates readers to continue to give emphasis to population education in their classrooms. It is used by all levels of PEP trained administrators and teachers.

7. This survey reveals also that teachers do play leadership roles in their community in influencing people in favour of population planning programmes. This is one of the long range PEP objectives and it is encouraging to find that this is being fulfilled.

DESCRIPTORS: *Information Materials Evaluation; Content Analysis; Information Transfer; Information User Needs; Bangladesh.*

SOURCE: Executive Director
Population Education Programme
Ministry of Education and Religious Affairs (Education Division)
House No. 62, Road No. 7/A (New)
Dhanmondi R.A.
Dhaka-9, Bangladesh

PHILIPPINES

55

Ministry of Education, Culture and Sports. Population Education Program. *An analysis of the population content of current textbooks in the Philippine public elementary and secondary schools.* Manila, 1973. 22 p.

OBJECTIVES

1. To determine what proportion of current textbooks have been devoted to population content and to determine the manner in which the content has been treated.

2. To provide information that would serve as baseline data for curriculum and textbook writers in preparing the scope and sequence of the curriculum and textbook content on population education by subject areas and school levels.

3. Specifically, it sought to find:

a) To what extent the topics in population education are included in the current textbooks;

b) To what extent the topics and sub-topics are covered in each subject area and school level;

c) If the population topics treated in each book are systematic, semi-systematic, casual or non-systematic; and

d) If the presentation of the population topic is classified as pro-natal, anti-natal or neutral.

METHODOLOGY

Sample: 74 volumes drawn from the textbooks used in grades I and III for the primary level, grade V for the intermediate level, and First and Third Years for the secondary level.

Data collection and analysis technique: Every page of the current textbooks was read. All the subject matter related to population education was identified, analysed and tallied. For quantitative analysis, the number of sentences devoted to population education were counted and converted to

pages on the basis of the mean number of lines per page computed for every book. Qualitative population discussion in a specific text was rated as either pre-natal, anti-natal or neutral. The treatment of population content in a specific text was rated as 'systematic', 'semi-systematic', 'casual' or 'non-systematic' according to a four-point scale. The unit of analysis was the textbook or volume.

FINDINGS

1. Of the 22,600 pages analysed in 74 volumes of current textbooks used in elementary and secondary levels in the Bureau of Public Schools, 2.13 per cent contain population concepts, of which 0.63 per cent are on demography, 0.83 per cent are on determinants, 0.32 per cent on consequences and 0.34 per cent on sexuality.

2. At the primary level, 2.45 per cent of the 6,310 pages examined contain population concepts. The number of pages of demography is 0.93 per cent, 0.94 per cent on determinants, 0.19 per cent on consequences and 0.39 per cent on sexuality.

3. At the intermediate level population concepts are contained in 2.46 per cent of the 6,972 pages analysed of which 0.66 per cent are on demography; 0.98 per cent are on determinants, 0.44 per cent on consequences and 0.38 per cent on sexuality.

4. At the secondary level, 1.65 per cent of 9,318 pages analysed contain population concept broken down into determinants 0.64 per cent; consequences 0.33 per cent; demography 0.40 per cent; and sexuality 0.27 per cent.

5. The current textbooks in social studies present the most population concepts with a percentage of 5.68

6. At the primary school level, population concepts on determinants are contained in all subject areas with the highest percentage (2.68 per cent) in social studies and the least in mathematics. The sub-topics of demography contained in all the subject areas is fertility with the highest percentage in Filipino followed by reading. Migration as a sub-topic under determinants is presented only in social studies with a percentage of 0.27.

7. Population concepts on demography are included in five subject areas ranked as follows: social studies 1.38 per cent; character education 0.38 per cent; music 1.14 per cent; English 0.32 per cent and mathematics 1.03 per cent.

8. Fertility as a sub-topic under 'determinants' is contained in all the subject areas with the highest presentation of 0.98 per cent in reading and least in English, with a percentage of 0.16 per cent. Mortality is presented in five subject areas ranked as follows: social studies 1.60 per cent; science and health 0.37 per cent; character education 0.56 per cent; reading 0.18 per cent; English 0.60 per cent. 'Migration' is included only in social studies with a percentage of 0.27 per cent.

9. Only textbooks in social studies present population concepts on consequence. The sub-topics

included are: Effects of RPG on economic development, 1.59 per cent, sociological and psychological effects, 0.10 per cent, and the effects of RPG on the educational system, 0.05 per cent.

10. Health and science is the only subject area that presents population topics on sexuality. The sub-topic discussed under sexuality is reproduction, with 4.65 per cent.

DESCRIPTORS: *Textbook Analysis; Content Analysis; Primary Grades; Secondary Grades; Philippines.*

SOURCE: Chief
Population Education Program
Ministry of Education,
Culture and Sports
Arroceros Street
Manila, Philippines.

PHILIPPINES

56

Ministry of Education, Culture and Sports. Population Education Program. *Consultant's evaluation of population education sub-units.* Manila, 1973. 7 p.

OBJECTIVES

To evaluate the population education sub-units in health, home economics, mathematics, science and social studies in terms of the usefulness of the overview and objectives, contents and strategies, evaluation procedures, materials for reference, time allotment and style and format of the lessons.

METHODOLOGY

Sample: 22 subject specialists and experts selected from the Ministry of Education and universities and colleges to evaluate the materials.

Data collection and analysis technique: The sub-units in different subjects were distributed to the selected consultants for their evaluation on the following aspects: usefulness of the overview and objectives, contents and strategies used, evaluation procedures, materials for reference, time allotment and style and format of the lessons. The sub-units were content analysed and evaluated using descriptive analysis.

FINDINGS

A. Home Economics

1. Time allotment is too short to carry out the suggested activities.

2. Overview and objectives as a whole are useful, but the language should be made simpler. Difficult or new terms should be explained.

3. Classify objectives according to the three domains: cognitive, affective and psychomotor.

4. Include general objectives.

5. Present the content in more comprehensive, detailed outline form.

6. Objectives and the corresponding activities should be indicated to guide the teachers as to

what will be taken up on the first, second or third day.

7. Change time allotment from number of days to number of class periods.

8. There should be consistency in the format of sub-units for all grade levels. Include major concept, conceptual theme as indicated in the mother unit in home economics.

9. References or readings should come from the primary source instead of newspaper clippings, magazines, etc.

10. It is difficult to conduct interviews and observations especially in cities where strangers are regarded with suspicion by homeowners. Inform parents about the proposed interview or survey during PTA meetings.

11. Reported interviews and surveys may arouse a negative attitude among parents considering the amount of time they will spend in attending to the interviewers.

12. Activities need not be limited to the ones included in sub-units. Include other alternatives.

B. Science

1. Instructions should be detailed on:

a) the use of the audio-visual materials

b) the performance of experiments

c) the use of background information for teachers.

2. Illustrations should be taken from the Medical Anatomy Book to make them accurate and simpler.

3. The sub-units should relate with other sub-units in other subjects. Should it make use of information taken up in a previous grade, then refer to it in the sub-unit, to assist teachers to tie up concepts.

4. Include information for teachers as appendices.

5. In citing sources, make use of scientific journals or books where the excerpts originated, to give it authority and credibility.

6. Make use of materials generally available in Philippine communities in the science experiments.

7. Tabulation should be shown in two ways. The first should be empty and the second as it is expected to be when filled. Put in an instruction that such a tabulation is only for the teacher.

8. Simplify sub-units which are term loaded. Explain parts and give sample terms instead of the long and high sounding scientific terms.

9. Use Philippine data and articles when available.

10. Questions should be more direct.

11. Suggested time allotment should be in terms of class periods instead of by days.

12. The Genitals should be taught in grade II. The Maleness

taught in grade II. The Maleness and Femaleness in man and animals should be taught in grade I.

C. Health

1. There is no formal evaluation as it is built into the activities.

2. Health is closely linked with home economics and biology.

3. Some of the teaching aids may not be available in the field.

Suggestions offered:

a) Where references are not available, appendices and background information intended for teachers should be more comprehensive.

b) Include teacher observation of pupil activities and practices in evaluation.

4. Revise illustration carried in one sub-unit.

5. Give alternative activities for areas where suggested activity may not be feasible. The overview will be more useful for the teacher, if sub-headings are made for the purpose, content and methodology of the sub-unit. Give the teacher at one glance, cues on what the section offers, which may encourage him to read it thoroughly.

6. Children find the lesson very interesting. Furnish teachers with visual aids.

D. Mathematics

1. Update the data.

2. Start with Philippine data in any level, if available.

3. In making projections assume that events do not change.

4. Use also negative population growth.

5. Bring in population concepts in proper sequence.

6. Write the topics instead of the pages in the mathematics guide.

7. Place captions for figures.

8. The definition of population growth should be distinct from the natural increase.

9. Population projection can be done by extrapolation if you have the equation of the curve.

10. Tell the teachers what to do. The guide speaks to the teacher. Do not use the third person.

11. Watch the vocabulary load. Teach the concepts but do not use the term.

12. Work on the mathematics concepts first before teaching the population concepts.

E. Social studies

1. The usefulness of the overview and objectives.

a) Overview

i) Use of model may help the teacher see clearly the intent of the sub-unit.

ii) Summary of teaching method should be given.

b) Objectives

i) Action words used for stating objectives behaviourally are not sufficiently varied.

ii) Most specific objectives for each sub-unit are not subsumed under general objectives.

iii) Most objectives are categorized.

iv) Objectives should be developmental, culminating and valuing.

v) Some objectives are too ambitious.

2. Whether the situations develop the process skill emphasized for the trade.

a) Lacks models of inquiry that may help teachers structure the processing of content.

b) Role-playing activity could better realize the objectives desired if model for role-playing is appended in the teacher's guide.

c) Techniques of interviewing suggested by sociologists may enable the students to be more 'scientific' in their approach.

d) Simulation games may be more made easier for the class to use if a model is followed.

e) A more systematic evaluation of the student's acquisition of process skills is needed, otherwise it is difficult to have a basis for saying that the process skills have been developed.

f) There should be a summing up, rounding up or generalization at the end of a lesson.

3. Whether activities lead to the attainment of objectives.

a) The lesson activities and procedures do not seem to wind up explicitly with the attainment of the generalizations envisioned for each sub-unit.

b) Only one sub-unit winds up with a statement of commitments.

c) Many of the teaching units do not have a well-designed evaluation to check whether the objectives set for the lesson have been attained.

d) Some of the tests only check the attainment of knowledge. They should also test understanding, abilities, attitudes and values.

e) Many of the activities tend to indoctrinate concepts of 'family control' and 'population control'.

f) Readings appear to be inadequate.

g) More explicit directions or explanations should be given in carrying out some of the activities.

h) Game in grade VI is too long and complicated.

4. Whether the facts are up-to-date and accurate.

a) Low level questions for evaluation.

b) One sub-unit is not explicitly designed to follow the conceptual approach.

c) Storytelling by the teacher is frowned upon by some in social studies education.

5. Whether the ideas are clear.

a) Statement of related ideas may be improved.

b) Some sub-generalizations do not seem to reflect the generalization.

6. Whether parts of the sub-units are controversial.

a) Comparison of large and small families appear to be biased in favour of small families.

b) Large families are pictured as undesirable.

7. Others

a) Lacks value judgements.

b) Concentrates too much on the number of children.

c) Time allotment is not realistic.

d) Content is relevant.

e) Content is too heavy.

f) Approach is simple and to the point.

g) Approach is technical.

h) Most situations and values are middle-class.

DESCRIPTORS: *Instructional Materials Evaluation; Content Analysis; Philippines.*

SOURCE: Chief
Population Education Program
Ministry of Education,
Culture and Sports
Arroceros Street
Manila, Philippines

REPUBLIC OF KOREA

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Central Education Research Institute. *Curriculum development for population education in social studies through grades 1-3.* Seoul, 1972. 133 p. (CERI research edition no. 63)

OBJECTIVES

1. To analyse trial textbooks and related textbooks materials in social studies through grade I to III as basis in the development of textbooks and teacher's guide.

2. To pre-test the teacher's guide developed in a workshop.

METHODOLOGY

Sample: Trial textbooks of social studies and related textbook materials for grades 1-3 in elementary schools were the subject of analysis. The study also tried out the teacher's guides which had been developed on one of the designated Experimental Schools on two grades 3 classes.

Data collection and analysis technique: The textbooks on social studies were content analysed to suggest suitable contents for the revised textbooks and teacher's guide for population education. Then a meeting was held with textbook compilers and authors assigned to revise the textbooks, to provide them with guidelines for revision. Then, in order to examine whether the teachers' guide develped was adoptable in schools, a field test was conducted in two grade 3 classes. The whole study included analysis of the textbooks and revised curriculum, a workshop to develop the revised materials and trial of these developed materials.

FINDINGS

1. Objective of population education. As a result of the study, a set of instructional population education for elementary schools in general and for grades 1-3 were set up through the joint work of the research team and the textbook compilers and authors.

2. The content of population education. The content of population education to be integrated in social studies through grades 1-3 were classified into two parts: the directly related content for the trial textbooks and the indirectly related content.

3. The teacher's guide of population education. The teacher's guide for grades 1-3 was developed with the co-operation of the textbooks compilers and authors. The material contained instructional directions and effective teaching-learning materials and strategies.

DESCRIPTORS: *Textbook Analysis; Content Analysis; Primary Grades; Instructional Materials; Field Tests; Rep. of Korea.*

SOURCE: Chief
Population Education Project
Korean Educational
Development Institute
20-1 Umyeon-Dong
Gangnam-Gu, Seoul 135-00
Republic of Korea

REPUBLIC OF KOREA

58

Central Education Research Institute. *Project in curriculum improvements for population education in the elementary and secondary schools of the Republic of Korea; the first stage final report.* Seoul, 1971, p. 33-73 (Formulation of population topics for the revision of curricula).

OBJECTIVES

1. To analyse and review population topics by identifying materials, areas and topics related to population matters contained in current elementary and secondary school textbooks.

2. To select materials related to population problems for inclusion in the curricula and textbooks of primary and secondary schools.

3. To organize and arrange the selected materials by each school level.

METHODOLOGY

Sample: 210 volumes of elementary and secondary school textbooks on social studies, science, arithme-

tic, practical arts, geography, history, civics, home economics, physical education, general social studies, politics, economics, Korean history, world history, biology.

Data collection and analysis technique: Content analysis to identify all topics related to population problems. The population topics were arranged according to a number of categories set up. They were also analysed quantitatively and qualitatively. The unit of measurement used was the 'population sentence' which is a complete sentence that emphasizes a population idea.

FINDINGS

1. Topics concerning population problems occupy a relatively small portion (0.37 per cent) of all subject matters in school textbooks.

2. More topics concerning population problems are included in textbooks for higher grades, and social studies textbooks contain the largest percentage of topics concerning population problems.

3. The most popular topics are in the category of 'the facts of population phenomena'.

4. Concern for the quality of treatment of many population problems in textbooks is rather casual. Such casualness is greater in textbooks for lower grades, while topics on population problems are treated more systematically in textbooks for higher grades.

5. The following objectives by school level should be introduced:

For primary school:

a) To bring about the proper realization of the reasons why various problems are arising from population increase in Korea and further to arouse greater concern about population problems.

b) To bring about proper realization of the present size of families and communities and the population of Korea (number, distribution, density, composition, etc.) in order to afford a clear understanding and arouse concern so as to influence population decision-making in the home, community and national economic development.

c) To afford a clear understanding of the present status of population concentration in urban districts and its influence on rural communities and the national economy.

d) To afford a clear understanding of the fact that population increase exerts influence upon the living conditions of the people in individual homes, schools, local communities, our country and the world, and further promote an active concern about this influence.

e) To bring about the realization of the advantages drawn from smaller family size by studying the relationship between family size and financial conditions at home.

For middle school:

a) To bring about realization on the part of students of the fact that population increase gives rise to serious problems by developing the students' understanding of various facts about population in Korea and the world.

b) To work toward a solution for population problems by providing an outlook toward the domestic, social and national problems caused by over population.

c) To bring about the realization that population control and the qualitative improvement of population can aid economic development.

d) To bring about a realization of the necessity for and importance of a family programme.

For high school:

a) To have students analyse and examine the causes of population problems by a comparison of various facts about population in Korea and the world.

b) To build up sound critical judgement as to the relationship between population increase and national development and to bring about the realization of the importance of population control.

c) To have the students develop their own solutions to population problems by discussing of traditional attitudes and other factors impeding population control.

DESCRIPTORS: *Textbook Analysis; Content Analysis; Primary Grades; Secondary Grades; Republic of Korea.*

SOURCE: Chief
Population Education Project
Korean Educational Development Institute
20-1 Umyeon-Dong
Gangnam-Gu, Seoul 135-00
Republic of Korea

REPUBLIC OF KOREA

59

Korean Educational Development Institute. *Approaches to curriculum organization for population education.* Seoul, 1975. 73 p. (KEDI research report no. 19).

OBJECTIVES

1. To identify specific methods of organizing the population curriculum which would help the schools promote population education in a more effective way.

2. To develop the conceptual structure of population education.

3. To analyse the population content within the existing curricula in the light of the conceptual structure and to identify the problems associated with the curriculum organizations.

4. To identify the criteria for organizing a population education programme.

METHODOLOGY

Sample: The curricula of the primary, middle and high schools. The 31 generalizations comprising the conceptual structure of population education served as criteria in the analysis. The generalizations are divided into six content areas -

human reproduction and family planning, family size and standard of living, population and environment, population and the economy, population policies and programmes and the effects of the population phenomenon on human life. These generalization contained sub-contents.

Data collection and analysis technique: The sub-contents included in the generalizations were identified and analysed in the existing curricula, in reference to subject matters and grade levels and compared with the conceptual structure. The knowledge, needed to be added or supplemented, was identified and then the sub-contents in the existing curricula were again analysed in terms of continuity, sequence and integration.

FINDINGS

1. Some content was found to be covered at length whereas some were not covered at all. For example, no mention was made of the sub-contents in the areas of human reproduction/ family planning and population policies - such as fertility behaviour and the effects of social customs and religious values on population policies.

2. The generalization about man and the ecosystem in the area of 'man and the environment' are fully covered, with balanced distributions among the grade levels and subject matters.

3. Among the subject areas, social studies covers population knowledge sufficiently. All in all, however, the existing curricula leaves ample room for the reinforcement of population content based on the conceptual structure of population education.

DESCRIPTORS: *Curriculum Evaluation; Primary Grades; Secondary Grades; Republic of Korea.*

SOURCE: Chief
Population Education Project
Korean Educational Development Institute
20 Umyeon-Dong
Gangnam-Gu, Seoul 135-00
Republic of Korea

REPUBLIC OF KOREA

60

Korean Educational Development Institute. *A study on the curriculum and instruction materials for population education in elementary and middle schools; summary report of the small-scale tryout.* Seoul, 1975. 54 p. (KEDI research report no. 22).

OBJECTIVES

1. To validate the relevancy and effects of the developed population education curriculum and materials in actual classroom instruction.

2. To identify problems in applying the curriculum to classroom instruction with special emphasis on content, time allotment, selection of related subject areas and instructional process.

3. Specifically, the following questions are posed:

a) Is the selected content relevant to children?

b) Does the selected content effectively lead to the attainment of the population education goal?

c) What are the prerequisite skills or knowledge for learning the selected content?

METHODOLOGY

Sample: Population education teaching/learning materials consisting of teacher's guides and audio-visual materials and student workbooks, for the fourth, fifth and sixth grades of primary school and first, second and third grades of middle schools. One primary and one middle school were selected from each province totalling 22 across the nation. The subjects for the tryout were social studies, Korean history, mathematics, nature, physical education and practical arts in the primary schools; social studies, Korean history, mathematics, science, physical education and home economics in the middle schools.

Data collection and analysis technique: Pre- and post-tests in the form of interviews, questionnaires and meetings. Means and percentages were used to interpret the data.

FINDINGS

1. Both the teachers and students reacted favourably to population education. Primary teachers were more favourable than middle school teachers.

2. The trial instruction in population education failed to yield a satisfactory level in student achievement. The average points of student achievement at each grade level in all related subjects were far below the mastery level. Mathematics both in primary and middle schools showed the lowest point of student achievement. Whereas the average points of the other subject areas exceed 50, those of mathematics ranged from 30 to 40.

3. There was no significant difference between major cities and minor cities while rural areas scored about 10 points below average.

4. Many teachers experienced difficulty understanding the materials and suggested the need for more supplementary materials.

5. Classroom observation revealed that the teachers were not making full utilization of teacher's guides.

6. To match the contents with the objectives, it was found that contents of population education curriculum required additions, deletions and partial revision.

7. The time allotted varied between grades from 13 to 24 hours per year. There was also a variation in the time allocated for boys and girls with girls receiving longer exposure. There was no serious problem with the implementation of the population education curriculum.

8. Many teachers favoured the infusion approach for incorporating population education into the existing curriculum.

9. It appeared essential that an instructional guide be developed that would give the teachers flexibility in organizing the

learning contents on an autonomous basis.

10. The content to be added included population policies in social studies, man and ecosystem in nature, sex education in physical education and the parents' views of children in practical arts. Lacking relevancy to the objectives was the content concerning 'human dignity and population' in grade VI social studies, 'family size and clothing' and 'family size and mothers' workloads' of grade V practical arts in primary school. The content to be revised because the terminology was not understood by the students included purchasing methods in 'family size and purchase of food' in middle school home economics, and 'population and nutrition and population congestion'.

DESCRIPTORS: *Curriculum Evaluation; Instructional Materials Evaluation; Primary Grades; Secondary Grades; Republic of Korea.*

SOURCE: Chief
Population Education Project
Korean Educational Development Institute
20-1 Umyeon-Dong
Gangnam-Gu, Seoul 135-00
Republic of Korea

UNESCO

61

Manee Kuanpoonpol. *Home economics education and population education a survey study in selected Asian countries.* Bangkok, Unesco Regional Office for Education in Asia and the Pacific, 1976. 163 p.

OBJECTIVES

1. To identify the role of home economics in school curricula for the development of population education.

2. To examine the home economics structure in Asia particularly in relation to the total curriculum.

3. To determine the composition of a strong home economics programme, particularly in relation to the particular educational system and nation and the quality of educational manpower.

METHODOLOGY

Sample: Personnel of home economics programmes of nine countries - India, Indonesia, Iran, Malaysia, the Philippines, Republic of Korea, Singapore, Sri Lanka and Thailand.

Data collection and analysis technique: (a) survey of documents and materials available from the governments and international agencies including classroom materials and teacher notebooks; (b) interviews with authorities in the countries; (c) observation of classes in action; (d) observation of homes in urban and rural areas and out-of-school activities and programmes.

FINDINGS

1. In most countries, policy makers and administrators appear to agree that home economics is a subject with which population education can be fused rather naturally. However, it should be remembered that home economics is usually compulsory in some countries for all girls, but not

for boys. In some countries where work experience is a compulsory subject for all in elementary and lower secondary schools, there is an excellent opportunity to have home economics (work experience in the home) required of all children of both sexes.

2. Home economics in Asian countries is generally based on two different models. The earlier model relates home economics to the girl's and women's role in the home and tends to concentrate on skills in housework, cookery and needlework; the subject is meant only for girls. The newer model sees home economics as the whole integrated body of knowledge aiming at the quality of life and the well-being of the family. This model would include not only the skills in the housework, cookery and needlework, but also the other skills - decision-making, problem-solving, managerial skills, and the sharing of responsibilities among members of the family. It tends to involve everyone in the family - male and female, adults and children.

Obviously, in the latter context home economics is more closely related to population education. Based on this model, population education concepts can be integrated very naturally in many topics from each of the various areas of home economics - food and nutrition, clothing, housing, home management, and family and child development.

3. Three countries under this study, the Republic of Korea, the Philippines and Thailand, have already integrated population education into various areas of home economics. India has been preparing to do so.

4. Home economics is essentially a family centred, skill-orient oriented, and decision-making subject. The learning experiences should be planned not only to foster knowledge, skills and attitude, but also to focus on a family. When teaching-learning activities are focused on the family in a situation simulating reality, students can be guided to discover for themselves important issues related to family size.

5. The most frequently used instructional methods in Asian countries are the lecture and individual projects in needlework and handicrafts. Class discussion, group discussion, research and inquiry, and demonstration have been employed in teaching home economics with varying frequency. It is obvious that there is a need for improving the quality of teaching. The training of teachers, both pre-service and in-service, should emphasize methodology particularly a family-centred, skill-oriented and problem-solving approach - an approach which helps the learners to discover problems rooted in reality, to think about them, and try to solve them.

6. Textbooks, references, and other instructional aids, even teaching guides in home economics in national languages are scarce or practically unavailable in many countries. An investment in reading materials, textbooks, and other instructional materials is as essential to home economics as other subjects.

7. More than half of the teachers teaching home economics in the lower levels, elementary and lower secondary schools, are insufficiently trained.

8. In some countries with advanced programme in home economics at the university level, the teacher training component in home economics seems to be less attractive and produce very few teachers.

DESCRIPTORS: *Curriculum Evaluation; Home Economics Education; Asia.*

SOURCE: Population Education Clearing House
Unesco Regional Office for Education in Asia and the Pacific
P.O. Box 1425, General Post Office
Bangkok 10500, Thailand

THAILAND

62

Taninta Buacharoon. *An analysis of textbooks concerning ideas towards population.* Bangkok, Population Education Project, Mahidol University, 1975. 40 p. (Research report paper no. 15)

OBJECTIVES

1. To examine the quality of population education content by topic and sub-topic as integrated in various textbooks used in elementary and secondary schools.

2. To ascertain the quality of the population content by identifying: (a) the content as being simple or complex; (b) the treatment of the content as being systematic, casual, wrong or outdated; and (c) to determine whether ideas on fertility and rural/urban migration are supporting, opposing or neutral.

3. To identify any outstanding passages.

METHODOLOGY

Sample: 389 selected textbooks commonly used in elementary and secondary schools.

Data collection and analysis technique: Content analysis using the variables mentioned in the objectives. Population content was: (a) counted for number of sentences; (b) identified as being a particular topic and sub-topic of the population content; (c) identified as being systematic or casual or wrong; (d) identified as being simple or complex; (e) (if fertility or migration) identified as being supporting or opposing or neutral. The tabulation sheets were then combined by subject and grade and population sentences were then converted into population pages.

FINDINGS

1. Out of 389 textbooks (60,361 pages) only 120 volumes (about one-third) include some population discussions.

2. Most population content was found under the sub-topic 'demographic factors and data' of the topic 'Population Study'. Ideas on 'fertility' and 'study and understanding of population situations and problems and ways of solving problems' were rarely discussed. The presentation of population content emphasizes facts rather than problems.

3. Social studies contained most population content followed far behind by natural sciences.

4. Two-thirds of the content was simple and casual (that means that passage was concerned with only one or a few of the components of a study of population). Virtually all of the remainder was 'simple' and 'systematic'.

5. From the entire survey, only two passages were judged to be exceptionally good, comprising a systematic treatment of complex content. Although they were from two different subjects, both covered the same topics, the relationship between population growth and natural resources.

DESCRIPTORS: *Textbook Analysis; Content Analysis; Primary Grades; Secondary Grades; Thailand.*

SOURCE: Director
Population Education Project
Faculty of Social Science and Humanities
Mahidol University
25/25 Moo 5
Tambon Salaya
Amphor Nakorn Chaisri
Nakorn Pathom 73170
Thailand

THAILAND

63

Achara Nawachinda. *The introduction of population education into the curriculum for Bachelor of Science in Agriculture.* M.Ed. thesis, Mahidol University, 1981. In Thai with English abstract.

OBJECTIVE

1. To identify the relevance and appropriateness of population education content to agricultural subjects.

2. To determine a suitable approach for introducing population education into curriculum designed for the degree of Bachelor of Science in Agriculture.

METHODOLOGY

Sample: 88 staff members teaching courses towards Bachelor of Science in Agriculture at Kasetsart University, divided into three groups: Plant Science, Animal Science and General Agriculture Science.

Data collection technique and methodology: Self-administered questionnaire.

FINDINGS

1. The majority found the content of population education unsuitable and irrelevant to the three disciplines under agriculture.

2. Fifty-eight respondents or 66 per cent agreed to include population education content in the curriculum for the degree of Bachelor of Science in Agriculture. The design should be in the form of integrated courses and separate courses. In addition, 30 respondents believed that the content should also be included in the general core courses in social science and humanities. Eight respondents believed that population education should be designed as specialized core courses for each of the major fields and in the area

of farm training practices.

3. Twenty-six respondents or 29 per cent disagreed with introducing population education content in the curriculum for the degree of Bachelor of Science in Agriculture. The reason for the disagreement given by 16 respondents was that population education could be learned better in other settings. Another reason given by 10 respondents was that population education content had little or no relevance to subjects in the curriculum.

DESCRIPTORS: *Introductory Approach; Curriculum Content; University Curriculum; Agricultural Colleges; Thailand.*

SOURCE: Director
Population Education Project
Department of Education
Faculty of Social Science
and Humanities
Mahidol University
25/25 Moo 5, Tambon Salaya
Amphor Nakhon Chaisri
Nakhon Pathom 73170
Thailand

THAILAND

64

Nisa Suwanpratest. *The teachers' opinions on population education contents in lower secondary curriculum.* M.Ed. thesis, Mahidol University, 1980. 316 p. Unpublished. In Thai with English abstract.

OBJECTIVES

To investigate and compare the opinions of population education teachers in lower secondary schools on population education content for the year B.E. 2521 secondary curriculum, classified by their geographical regions, educational background, teaching experience and experiences in population education.

METHODOLOGY

Sample: 360 M.S. I and M.S. II population education teachers who taught in the year 2522, selected by multirandom sampling from the secondary schools under the General Education Department throughout the country.

Data collection and analysis technique: Questionnaires mailed to the sample teachers. 81.45 per cent were returned for analysis.

FINDINGS

1. More than 60 per cent of the teachers rated the objectives in terms of clarity, appropriateness with student age, congruence with local needs, comprehensibility, and applicability, to be at 'average' to 'high' levels. Knowledge and comprehension of population education content was regarded to be the most important of all objectives listed. The results were similar in both grades.

2. Few cases showed statistically significant differences in opinions with regard to regions, educational backgrounds and experiences in population education.

3. More than 60 per cent rated various characteristics of the content (i.e. congruence with objectives, appropriateness with student age, scope, continuity, congruence with

local needs, difficulty, flexibility, persuasiveness, and usefulness) to be at 'average' to 'high' levels on the population education content.

4. There were few significant differences in teachers' opinions of the content of population education according to the four variables (i.e. regions, educational backgrounds, teaching experiences and experiences in population education).

5. The variable 'regions' made the teachers' opinions significantly different in more cases than the other variables did. This might be due to the fact that the sample teachers were only slightly different from each other in their educational backgrounds, teaching experiences and experiences in population education.

DESCRIPTORS: *Teacher Attitudes; Secondary School Teachers; Curriculum Content; Secondary School Curriculum; Thailand.*

SOURCE: Director
Population Education Project
Department of Education
Faculty of Social Science and Humanities
Mahidol University
25/25 Moo 5
Tambon Salaya, Amphor Nakhon Chaisri
Nakhon Pathom 73170
Thailand

THAILAND

65

Nisarat Sinlapadech. *Construction of population education teaching packages for teacher training colleges.* M. Ed. thesis, Mahidol University, 1978. In Thai with English abstract.

OBJECTIVE

To evaluate the effectiveness of the population education teaching package entitled Basic Knowledge on Demography, taught in two population education courses in the Higher Certificate of Education Level.

METHODOLOGY

Sample: First draft of the teaching packages pre-tested with 45 students in the Higher Certificate of Education Class. After revision, field-tested with two groups of samples; 35 students studying sociology 331 course and 45 students in home economics.

Data collection and analysis technique: Tests measuring academic achievement.

FINDINGS

1. The teaching packages when applied in sociology class were highly acceptable and equal to the set standard.

2. The teaching package when applied in home economics class were lower than the set standard but still effective.

3. The arithmetic means of the pre-tests and the post-tests of the four teaching packages have shown statistically significant differences at the level of .01 for both groups which showed that they have improved the students' knowledge.

DESCRIPTORS: *Instructional Materials Evaluation; Teacher Training Curriculum; Thailand.*

SOURCE: Director
Population Education Project
Department of Education
Faculty of Social Sciences and Humanities
Mahidol University
25/25 Moo 5, Tambon Salaya
Amphor Nakhon Chaisri
Nakhon Pathom 73170
Thailand

THAILAND

66

Pluang Geowubul. *Development of population education programmed instruction on "Fertility for Students of Higher Certificate of Education".* M. Ed. thesis, Mahidol University, 1979. In Thai with English abstract.

OBJECTIVE

To evaluate the effectiveness of the population education programmed instruction on 'Fertility' for students of Higher Certificate of Education.

METHODOLOGY

Sample: (a) students of Higher Certificate of Education in Songkhla Teachers' College who took health education as a major subject; (b) two groups of students of Higher Certificate of Education who took home economics as a major and minor subject; (c) one group of 59 students from Songkhla Teachers' College; and (d) 32 students from Suansunanta Teachers' College.

Data collection and analysis technique: Individual and small group testing using a test of knowledge.

FINDINGS

1. The programmed instruction was more efficient than the standard set.

2. It was effective in increasing knowledge gain as shown in the significant difference between the pre-test and the post-test at the .01 level.

DESCRIPTORS: *Instructional Materials Evaluation; Teacher Training Curriculum; Thailand.*

SOURCE: Director
Population Education Project
Department of Education
Faculty of Social Sciences and Humanities
Mahidol University
25/25 Moo 5
Tambon Salaya
Amphor Nakhon Chaisri
Nakhon Pathom 73170
Thailand

THAILAND

67

Prayoon Benchawong. *Construction of teaching package for learning center classroom on "The Effect of Migration" in teachers colleges' population education course.* M. Ed. thesis, Mahidol University, 1979. In Thai with English abstract.

OBJECTIVE

To evaluate the effectiveness of the teaching package, 'The effect of migration', applied in two courses taught in the Higher Certificate of Education and Bachelor Degree levels of the Teachers College.

METHODOLOGY

Sample: 23 Higher Certificate students and 21 Bachelor Degree students taking up sociology 331: Population education consisted the sample.

Data collection and analysis technique: Questionnaire testing gain in knowledge. The data were analysed by finding the arithmetic mean of the pre-test and the post-test of both groups.

FINDINGS

1. The effectiveness of the teaching package was lower than the set standard but accepted for effectiveness in teaching.

2. The package significantly improved the students' knowledge. The arithmetic mean of the pre-test and post-test of both groups were statistically significantly different at the 0.01 level.

DESCRIPTORS: *Instructional Materials Evaluation; Teacher Training Curriculum; Thailand.*

SOURCE: Director
Population Education Project
Department of Education
Faculty of Social Sciences and Humanities
Mahidol University
25/25 Moo 5, Tambon Salaya
Amphor Nakhon Chaisri
Nakhon Pathom 73170
Thailand

THAILAND

68

Weerapol Sararattana. *Expectations of educators in Ubonratchathani upon the implementation of population education unit of the B.E. 2521 primary school curriculum.* M. Ed. thesis, Mahidol University, 1982. 143 p. Unpublished. In Thai with English abstract.

OBJECTIVES

1. To determine whether the population education unit, with regard to learning objective, concept or principle, and content in the B.E. 2521 primary school curriculum was appropriate for classroom implementation.

2. To compare the expectations of curriculum administrators, academic personnel or curriculum supervisors, and teachers in the primary education level, on the implementation of the population education curriculum with respect to their immediate role.

3. Based on their recommendations, undertake an improvement of the population education unit.

METHODOLOGY

Sample: 145 curriculum administrators, 65 academic personnel or curriculum supervisors, and 125 teachers in Ubon Ratchathani.

Data collection and analysis technique: Questionnaire.

FINDINGS

1. A high percentage of educators in the three groups agreed that the learning objective, concept of principle, and content of the population education unit were highly appropriate for classroom implementation.

2. When the research compared the expectations among three groups of educators, there were statistically significant difference the learning objective section but not in the concept or principle and content sections.

3. Learning objective setting

a) Certain objectives should give more emphasis to the locality and provincial levels than the national level with regard to the numeration of population unit and population change in the curriculum;

b) Objectives should be more precisely and clearly stated;

c) They should not only be limited to memory or recall ability but also include some other cognitive abilities;

d) Criteria should also be added in the objective section so that it will be readily used in evaluating teaching.

4. Concept or principle setting

a) Concepts or principle should give more stress to causes and consequences of population change in the community and provincial levels;

b) The wording in this section should be more clearly and precisely defined for better understanding;

c) Stated concepts or principles should follow the 'shared problem solving method';

d) Concepts or principles should be presented in short and precise statements.

5. Content setting

a) Content should be limited to the family community and provincial

rather than the national level;

b) More issues including details should be added;

c) Population education training on content and teaching method should be given more emphasis for the teacher;

d) Content and issues should be frequently updated.

DESCRIPTORS: *Curriculum Evaluation; Primary School Curriculum; Supervisor Attitudes; Teacher Attitudes; Thailand.*

SOURCE: Director
Population Education Project
Department of Education
Faculty of Social Sciences
and Humanities
Mahidol University
25/25 Moo 5
Tambon Salaya
Amphor Nakhon Chaisri
Nakhon Pathom 73170
Thailand

Section Four

EVALUATING TEACHING METHODOLOGIES

Section Four

EVALUATING TEACHING METHODOLOGIES

A. Analysis of the Studies

The teaching of population education exacts subject competence and mastery of skills from the teachers in the use of non-traditional teaching methodologies. Population is a value-laden subject. Because the subject matter is controversial, ethics demands a free choice; meaning, the teacher must help the students make responsible decisions arrived at from a rational study of alternatives, of advantages and disadvantages of a given issue. The teacher cannot simply hand down ready-made answers to the students. The students must be given the opportunity to explore their own feelings, thinking and value structure on all the possible aspects of the phenomenon and discuss alternative issues. This process will enable students to make responsible decisions regarding their population-related behaviour now and in the future. The appropriate method used to teach population education is not the traditional lecture method where the teachers tell students how to behave. In the ideal teaching situation, the students are given the opportunity to study various alternatives and the pros and cons of an issue on which they rationally base their answers. Examples of these non-traditional methodologies include the inquiry or discovery approach, values clarification, problem-solving and the like. Only very few countries in Asia, are seriously attempting to use these methodologies in teaching population education. Even then, there still leaves much to be desired because of a lack of clear understanding and the incorrect use of such methodologies by the teachers. Very few studies have yet been done on this aspect.

This section contains eight studies undertaken in the Philippines (five), India (one), Indonesia (one) and Thailand (one) variously conducted from 1971 to 1982. Seven of the studies are experimental in approach and involve comparisons of at least two groups that were similar in all respects except for the teaching method used. One is a descriptive study using a questionnaire for gathering data. In the experimental studies, generally, one group was taught by the traditional method while other groups were taught with various non-traditional teaching methods, such as the inquiry approach, modular approach, discovery method, values clarification or a combination of various informal methodologies such as role-playing, problem-solving, debates, discussions, games and simulation. The groups were then compared on the basis of student outcomes such as gains in knowledge, retention of factual information or concepts, development of desirable attitudes, development of critical thinking skills and more active participation in the classrooms. Tests measuring these different student outcome variables were administered to the students and then gain scrores (post-test scores minus pre-test scores) were compared, using statistical tests (T-tests, analysis of variance or analysis of co-variance) to determine whether one group had achieved significantly better scores than the others. Based on these statistical tests, inferences were made as to which teaching method was more effective. Five of the eight studies went one step further by investigating the influences of

intervening variables with the changes in the various mentioned outcomes, such as teachers' and students' sex, their culture, competence and personality; the degree of controversiality of the issues; the extent of administrative support; the duration of the study; the urban-rural variable; and the location of the schools.

The sample size also varied ranging from 40 students in one class in a certain school to 2,285 public and private elementary and secondary school teachers selected on a nationwide basis. Most studies selected their samples from several schools in one locality. Since most of the studies were experimental in design, the sampling size was generally small for easier control and management, usually with two to four groups or classes to serve as experimental and control groups, located either in one school or several schools.

The studies are not directly comparable because they do not all deal with only population education. Two studies also deal with social studies, biology, mathematics and health. The respondents also belonged to various educational levels (primary, upper secondary, university). Most significantly, the majority of the studies were received in the Population Education Clearing House as abstracts and there was no way of determining how these countries define these various teaching methodologies. The definition and use of such methodologies may not be exactly the same for all of the countries. Lastly, teacher and student abilities and skills (and their motivation) may not necessarily be at the same level for all countries. Nevertheless, the following broad generalizations can be made from an analysis of the findings:

1. Studies that compared the effectiveness of the traditional method with the various non-traditional methods in bringing about an increase or positive change in knowledge gave no clear-cut findings. One study revealed that there was no significant difference between the two, that the modular approach (individualized independent study) was more effective than the discovery and expository approaches, and yet another study showed that both methods were equally found ineffective - there was no gain in knowledge for both. However, two separate studies which compared the effectiveness of inquiry and learner-centred approaches and the values clarification strategy with the traditional method showed the success of the two non-traditional methods in this respect. Two abstracts included here give conflicting results about the discovery method. Two papers compared discovery with expository methods. One showed, on all counts, the superiority of the discovery method not only in population education but also social studies, health, biology and mathematics. The other found no significant gains in knowledge in either of the two methodologies.

2. Four studies dealt with student outcomes such as retention of facts, development of thinking skills, development of desirable attitudes, more student participation and development of more positive personality. The paper on values clarification is a review of research studies conducted to determine its effectiveness in population education and other subject areas. On all counts, the paper showed that value clarification strategy had a positive effect on learning, personality development, and attitudes towards the subject

matter and the classroom. The other papers dealt with the discovery approach and gave conflicting results. There is a general consensus that the discovery approach develops thinking skills, but no overall agreement on its effectiveness in promoting the retention of facts or the development of desirable attitudes. In fact, it was the expository method which instead brought about a significant change in the development of desirable attitude. In another paper, the modular approach proved more effective than the discovery approach, in bringing about positive changes in these other students outcomes.

3. The effectiveness of the discovery approach, modular approach and values clarification strategy in bringing about various student outcomes depends to some extent on various intervening variables such as student and teacher competence and personality, the time duration, administrative support, general culture and environment, the appropriateness of the controversial issues with the level of maturity of the students. Four studies dealt on these issues as applied on population education and other subject areas. The findings showed that:

a) The effectiveness of the value clarification strategy depends to some extent on the personality, mental ability and age of the students. The more competent, stable and mature the student, the more likely he is to learn under the discovery approach and value clarification strategy. There also seems to be a tendency for lower ability urban students, taught by the modular approach, to acquire and retain more knowledge, while semi-rural, higher ability students acquire more knowledge and develop thinking skills when taught by the modular approach.

b) The success of the discovery approach and the value clarification strategy depend to some extent on the competence and personality of the teachers. For instance, some studies showed that teachers who had a tendency for emotional instability, little self-sufficiency, introversion, submissiveness and inferiority, manifested doubt in applying the major component of the value clarification strategy. The more competent the teacher, the more likely the two methodologies will be effective.

c) The effectiveness of both methodologies depends to some extent on administrative support and cultural environment. The more supportive the administration and the more open and less authoritarian the society, the more likely the discovery approach is to be effective.

d) Sex, civil status, age, school level, length of time in handling population education, educational attainment and religion were found significantly related to the use of the value clarification strategy.

e) The effectiveness of the discovery approach depends to some extent on how much time is available for instruction. The shorter the time is, the more difficult it is for students to easily learn because this method requires a considerable amount of time to enable students to study various alternatives and discover the answer for themselves.

f) The effectiveness of the discovery approach also depends to some extent on the compatibility

of teaching methods in the mother units into which population education is integrated, with the use of the discovery approach.

Summary of research trends and implications

Not enough studies have been done to determine the effectiveness of any of the non-traditional teaching/learning methods in population education in Asia and the Pacific to warrant any useful generalizations about their effectiveness. The few research studies which have been carried out gave conflicting results, even to the extent of revealing the superiority of the traditional method over the discovery approach and other more modern teaching methodologies on some of the students outcomes. This situation may have arisen from the fact that the teachers who carried out these 'modern' methods were not sufficiently skilled or experienced in their use. This is a clear reflection of the existing conditions in the countries - the teachers themselves admitted their limited understanding of these 'new' teaching methods.

As the studies reveal, there are a lot of extraneous factors which account for their effective or ineffective use. For instance, authoritarian-oriented teachers cannot successfully teach by the discovery approach. Some students are not prepared to undertake the problem-solving process and time is too short for students to discover the various alternative sides of an issue by themselves. The fact that school administrators and the general environment or culture of the place do not allow open and free discussions of controversial population-related issues also inhibits the successful use of the methods. There are a lot of other factors which need to be explained to the teachers either through intensive training or through distributed materials to help them overcome these inhibiting factors and consequently, facilitate a more correct and effective use of these non-traditional teaching methodologies. In the meantime, more research studies on this particular aspect needs to be conducted using mainly the empirical design.

B. Exemplary Studies

INDIA

69

Faneuff, C.T. *Action research for the development of a pilot model for teaching population dynamics in the Karnataka State in India.* /Chapel Hill/ Carolina Population Centre, 1971.

OBJECTIVES

1. The main purpose of the project was to determine the feasibility of teaching an organized body of knowledge around central theme of 'Population Dynamics'. Stated explicitly the objectives of the study were:

a) To develop an educational model for disseminating population dynamics information for the schools of India.

b) To make a comparative study of the efficacy of the formal and informal instructional formats in imparting population dynamics information.

c) To provide defensible data to decision-makers in India, upon which future policy commitments could be based.

2. The objectives stated in the form of hypothesis were as follows:

a) There will be no significant difference between information gains of children in the traditional group (formal group) and the control group.

b) There will be no significant difference between information gains of children in the non-traditional (informal) group and the control group.

c) There will be no significant difference between information gains of children in the traditional group and the non-traditional group (formal and informal).

d) There will be no significant difference between information gains of urban and rural children.

e) There will be no significant interaction between urban and rural effects and treatment effects.

f) There will be no significant information gains between males and females.

g) There will be no significant interaction between sex and treatment effects.

h) There will be no significant information gains by students from classes not exposed systematically to the lessons within the same school.

METHODOLOGY

Sample: 1,400 Standard 9 students (boys and girls aged 12½-13½) from six urban and six rural schools selected on the basis of purposive sampling. Four groups were taught by the formal method, four by informal and the remaining four formed the control group.

Data collection and analysis technique:

1. The content of the curriculum model covered the following five areas:

a) Birth rate, mortality rate and population.

b) Health and population.

c) Food production and population.

d) Family size and population.

e) Standard of living and population.

2. The content was taught formally through a lesson plan approach involving the sequential steps of preparation, presentation, generalization, application and evaluation; and informally by including the pupils in a problem situation, initiating discussion on the topic, presenting audio-visual aids, helping role-playing, arranging field trips, debates and symposia. This was to provide the pupils with direct experience of the local environment through involvement in the problem.

3. Achievement tests were administered before and after the experiment for all the three groups: formal, informal and control.

FINDINGS

1. The formal and informal methods of instruction were equally effective in producing a significant information gain in the area of population dynamics.

2. Population dynamics information can be taught to Standard 9 children in Mysore and the level of knowledge gain is statistically significant.

3. There was no difference in the information gained about population dynamics between boys and girls.

4. Rural children in Karnataka State are more receptive to population dynamics information than the urban children.

5. The model developed for teaching population dynamics is viable and could be used with other Standard 9 students in India.

6. Children within specified limits of time can become knowledgeable about their life situation and global population problems.

DESCRIPTORS: *Experimental Teaching; India*

SOURCE: Chief
Population Education Project
National Council of Educational Research and Training
Sri Aurobindo Marg
New Delhi-110016, India

INDONESIA

79

Institute of Teachers and Education Sciences. *The effectiveness of modular method vis-a-vis verbal method in teaching population education.* Yogyakarta /1982/. 2 p. typescript.

OBJECTIVES

To determine whether the modular approach is more effective than the verbal approach in teaching population education.

METHODOLOGY

Sample: One group of 41 Physics students served as an experimental group and one group of 42 Chemistry students served as control group.

Data collection and analysis technique: Pre- and post-tests. The data were analysed by using the formula of covariance analysis.

FINDINGS

1. There was no significant difference in the mean of the knowledge stock of the two groups before the experiment.

2. After the experiment, there was no significant difference of the learning achievement between the two groups.

3. There was no significant difference between the effectiveness of the modular method and the verbal method in teaching population education.

DESCRIPTORS: *Modular Approach; Indonesia*

SOURCE: Population Education Institute
IKIP Yogyakarta
Sekip Blok N No. 24
Yogyakarta
Indonesia

PHILIPPINES

71

Ministry of Education, Culture and Sports. Population Education Program. *Value clarification in population education.* Manila, Population Education Program in coordination with the Child and Youth Research Center, 1978.

OBJECTIVES

1. To determine the effectiveness of value clarification as a methodology for teaching population education.

2. To determine how the personality of teachers, sex, civil status, age, school level, religion, duration, type of community and educational attainment affect the effective use of values clarification.

METHODOLOGY

Sample: 2,285 public elementary and secondary school teachers, randomly selected from the twelve regional school divisions.

Data collection and analysis technique: The Bernreuter Personality Inventory and Value Clarification Inventory (a descriptive method of research) was used. The data were treated statistically using percentage analysis, ranking, chi-square test and Z-test between proportions.

FINDINGS

1. Use of value clarification components

a) The valuing preferred by the highest percentage of population education teachers was a combination of both affective and cognitive processes.

b) Valuing instruction appeared to be student-centred.

c) The majority of the population education teachers practised the open-ended outcomes of valuing.

d) Valuing resources used seem to be a combination of discussion, paper-pencil, and role-play techniques.

e) No population education teacher expressed direct disagreement on the use of the valuing components, but many teachers were doubtful about the application of the components.

2. Personality traits of population education teachers

a) The majority of the population education teachers have normal personality traits.

b) The tendency for neurosis was significantly related to the type of community.

c) The self-sufficiency trait was significantly related to school level and educational attainment.

d) Developing introversion/extroversion was significantly related to civil status, age group, length of handling population education, educational attainment, and type of community.

e) The tendency for dominance/submission was significantly related to school level and type of community.

f) School level and type of community were significant factors in developing self-consciousness.

g) Sociability trait was significantly related to age group.

3. Personality traits and value clarification components

a) The application of the major components of value clarification was significantly related to personality traits.

b) Teachers who had tendencies towards emotional instability, lowness in self-sufficiency, introversion, submissiveness, and inferiority manifested doubt in applying the major components of valuing.

4. Use of value clarification components by specific variables

a) Sex was a significant factor in the use of valuing outcomes and valuing resources.

b) Civil status was significantly related to valuing processes, valuing instructions, and valuing resources.

c) Age group was highly related to the use of the four major components of valuing.

d) School level was significantly related to valuing instructions and valuing outcomes.

e) Length of handling population education was highly related to the use of the four major components of valuing.

f) Educational attainment was a significant factor in the use of valuing instructions and valuing outcomes.

g) Religion was significantly related to the use of valuing outcomes.

b) Type of community was significantly related to the use of the four major components of valuing.

DESCRIPTORS: *Value Clarification; Teacher Evaluation; Personality Studies; Philippines*

SOURCE: Chief
Population Education Program
Ministry of Education,
Culture and Sports
Arroceros Street
Manila, Philippines

PHILIPPINES

72

University of the Philippines System. College of Education. *The effectiveness of the discovery approach in teaching population education.* Funded by Population Center Foundation. Quezon City, 1976. 143 p.

OBJECTIVES

To determine which of the two approaches - the discovery-oriented or the expository approach - is more effective with regard to:

a) acquisition of factual information and concepts;

b) retention of factual information and concepts;

c) development of thinking skills; and

d) development of desirable social attitudes.

METHODOLOGY

Sample: Nine teachers and 656 high school students from four schools in Quezon City. Three sets of comparable classes were used from two high schools, two sets from another high school and one set from the fourth high school. The experimental group was taught by the discovery approach while the control group was taught by expository approach.

Data collection and analysis technique: A unit test administered to both the experimental and the control groups as a pre-test, post-test and post-post-test. The results were analysed by percentage ranking and analysis of covariance.

FINDINGS

1. In using the discovery-oriented and expository approaches, there were no significant differences in the acquisition of factual information and concepts between the two approaches.

2. The findings with regard to retention of facts and concepts were mixed. While two high schools showed significantly higher retention in the discovery approach group than retention in the expository approach group, the reverse was shown by the other two sampled high schools.

3. The discovery approach was more conducive to fostering the development of thinking and analysis skills than the expository approach.

4. The expository approach was significantly better than the discovery approach in developing desirable attitudes towards population matters.

DESCRIPTORS: *Value Clarification; Philippines*

SOURCE: College of Education
University of the Philippines System
Quezon City, Philippines

PHILIPPINES

73

Villanueva, Carmelita L. *On the effectiveness of the discovery approach as a teaching method for population education.* Manila, Population Center Foundation, 1976. 64 p. (Population Education Research Utilization, monograph series 1, part 2)

OBJECTIVES

To show, through an analytical literature review, the effectiveness of the discovery approach as a teaching method in other subject areas and how these findings can help in the use of the discovery approach in teaching population education.

METHODOLOGY

Sample: Selective sampling of studies on the effectiveness of the discovery approach as it has been used across different subject areas such as social studies, science, mathematics, geography and biology at different levels. These experimental studies compare two similar groups, one group being taught by the traditional method and the other using the discovery approach. The groups were then compared on the basis of student outcomes, such as learning, transfer and retention and critical thinking. Post-test scores minus pre-test scores were compared

using statistical tests e.g., t-test, analysis of variance and analysis of covariance.

Data collection and analysis technique: Comparison of studies according to variables such as learning, retention and transfer, critical thinking, more active student participation in the classroom, and in developing favourable attitude towards the subject matter and teacher. The studies reviewed were also compared on the basis of a number of intervening variables which accounted for the success or failure of the discovery approach. The limitation of the review or analysis centres mostly on the fact that many studies are not comparable with one another because there are differences in the definitions and uses of the discovery approach, different samples, different subject matter, and grade levels.

FINDINGS

The following generalizations were drawn from the review of the various research studies.

1. The discovery approach seems to be more effective than the traditional expository approach in bringing about learning, retention and transfer and when different kinds of discovery approaches are compared and guided discovery seems to be more effective than the independent discovery approach.

2. The discovery approach seems to be more effective than the traditional expository approach in stimulating critical thinking and more active student participation in the classroom.

3. The discovery approach seems to be more effective than the traditional expository approach in developing in students a favourable attitude towards the subject matter and towards the teacher.

4. The effectiveness of the discovery approach depends to some extent on teacher competence: the more competent the teacher, the more likely the discovery approach is to be effective.

5. The effectiveness of the discovery approach depends to some extent on student competence; the more competent the students, the more likely they are to learn under the discovery approach than under the traditional approach.

6. The effectiveness of the discovery approach depends to some extent on how much time is available for instruction.

7. The effectiveness of the discovery approach depends to some extent on administrative support and on the general culture and social environment of a society.

8. The effectiveness of the discovery approach also depends to some extent on the compatibility of its methods with the teaching methods used in the mother units into which population education is integrated.

DESCRIPTORS: *Inquiry Approach; Philippines*

SOURCE: Population Information Division
Population Center Foundation
P.O. Box 2065
Makati, Metro Manila
Philippines

PHILIPPINES

74

Villanueva, Carmelita L. *Value clarification on population education.* Manila, Population Center Foundation, 1977. 126 p. (Population Education Research Utilization, monograph series 2, part 2)

OBJECTIVES

To show, through an analytical literature review, the effectiveness of value clarification as a teaching method in other subject areas with the end in view of applying the findings on population education.

METHODOLOGY

Sample: Six value clarification models and strategies and a selective number of research studies done on the area. The research studies deal with the effects of value clarification on the attitudes, knowledge, and behaviour of students in elementary, high school, college and teacher training institutions. The majority of the studies are experimental, making use of the observation technique for gathering data, while the rest made use of paper-and-pencil tests.

Data collection and analysis technique: The 6 value clarification models were reviewed, compared and analysed according to four variables. These included: (a) valuing process: cognitive vs. affective; (b) student-teacher involvement: student-centred vs. teacher-centred; (c) outcome: value teaching vs. value processing, or closed-ended vs. open-ended; and (d) resources used classroom vs. self-instruction; writing vs. structured verbal exchanges vs. experiencing. The research studies were analysed and compared according to the following variables: (a) attitudinal change; (b) knowledge gain; (c) behavioural change; (d) student personality and competence; (e) teacher competence and personality; (f) controversial issues; and (g) administrative support.

FINDINGS

1. The type of valuing process chosen helps facilitate the value clarification and strategy. Some strategies emphasize the affective process, based on the premise that values are more easily developed subjectively and through empathy. Other strategies stress the cognitive process, as values are considered products of thinking rather than feeling.

2. The degree of student-teacher involvement helps facilitate the value clarification strategy. Some strategies are better facilitated if the students discover their values by themselves. Implementation of major student activities by the students requires minimum teacher participation. Greater teacher participation is required where his attempts at resolving value conflicts among students are to be resolved.

3. The kind of outcome determines how value clarification strategy should be implemented. Some strategies consider value processing as an end in itself: students do not arrive at a common value but are required to undertake the valuing process successfully. Other strategies require that students arrive at a value decision after considering a proposed set of alternative values. A more closed-ended strategy calls for resolution of conflicts among students.

4. The kind of resources and devices used facilitate value clarification. Strategies based on the assumption that valuing is a private and personal activity require that they be implemented through writing, paper-and-pencil activity, or self-instruction. Other strategies, based on the premise that values are acquired through experience, require that valuing be undertaken through simulation and role-playing. Still other strategies require that valuing be done through discussions and verbal exchanges to expose students to others' thinking and alternative values.

5. Students, given the opportunity to clarify their values or to undergo the value clarifying process, showed improvement in their attitude towards learning. They became more committed to, and purposefully, consistently, and constructively involved in school work.

6. Students given the opportunity to clarify their values in the classroom showed improvement in grades and a gain in knowledge.

7. When the valuing process was instituted among children described as apathetic, indecisive, over-conforming, inconsistent, flighty, and lacking value clarity, these types of behaviour became noticeably less acute and less frequent.

8. The effectiveness of the value clarification strategy depends (a) on the personality, mental ability and age of the students; (b) to some extent on the competence and personality of the teacher; (c) on the degree of controversiality and value content of population issues and their appropriateness to the level of maturity and experience of the students; and (d) on administrative support and sanction.

DESCRIPTORS: *Value Clarification; Philippines*

SOURCE: Population Information Division
Population Center Foundation
P.O. Box 2065
Makati, Metro Manila
Philippines

PHILIPPINES

75

Yong-Duck Paik. *A comparative study on three approaches in the teaching of population education.* Quezon City, College of Education, University of the Philippines, 1977. 582 p.

OBJECTIVES

To compare the modular approach with the discovery and expository approaches in teaching population education in high school social studies in the Philippines in each of the following aspects: (a) acquisition of knowledge; (b) development of thinking skills; (c) change to desirable attitude towards population matters; (d) retention of the acquired knowledge, thinking skills and changed attitude towards population matters for third year students of a semi-rural high school; an urban high school; lower ability in semi-rural and urban high schools; and higher ability in semi-rural and urban high schools.

METHODOLOGY

Sample: Three classes from each of the two schools were randomly assigned to the modular, discovery and expository groups. Two hundred

and fifty-eight students and two experimental teachers were involved.

Data collection and analysis technique: Non-randomized control group pre-test, post-test and post-post-test design with the modular, discovery and expository groups as the experimental groups. The three groups, handled by one teacher in each of the two schools, were taught the same population lesson units using the modular, expository and discovery approaches. The instrument used was 'Population Education Test for Third Year High School Students' to measure acquisition of knowledge, development of thinking skills and attitudes.

The Population Education Test was administered to the experimental groups thrice as pre-test, post-test, and post-post-test. The IQ test was administered once to determine ability grouping. The study made use of current and existing classroom situations during the experiments. The statistical analysis used was covariance analysis technique.

FINDINGS

1. Acquisition of knowledge

In both the semi-rural high school and the urban high school the modular group had a significantly higher post-test mean score than the discovery and expository groups. There was no significant difference in the post-test mean scores between the discovery and expository groups.

2. Development of thinking skills

In both the semi-rural high school and the urban high school the modular group had a significantly higher post-test mean score than the discovery and expository groups. There was no significant difference in the post-test mean scores between the discovery and expository groups.

3. Attitudinal change

a) Semi-rural high school: The expository group had a significantly higher post-test mean score than the discovery group. There was no significant difference in the post-test mean scores between the modular and discovery groups and also between the modular and expository groups.

b) Urban high school: The modular group had a significantly higher post-test mean score than the discovery and expository groups. There was no significant difference in the post-test mean score between the discovery and expository groups.

4. Acquisition of knowledge by ability group

a) Semi-rural high school: The modular higher ability group had a significantly higher post-test mean score than the discovery and expository groups. There was no significant difference in the post-test mean scores between the discovery and expository higher ability groups, and also no significant difference between the three lower ability groups.

b) Urban high school: There was no significant difference in the post-test mean scores between the three higher ability groups. The modular lower ability group had significantly higher post-test mean score than the discovery and expository lower ability groups, and no significant difference between the discovery and expository lower ability groups.

5. Development of thinking skills by ability group

a) Semi-rural high school: The modular higher ability group had a significantly higher post-test mean score than the discovery and expository higher ability groups. There was no significant difference in the post-test mean scores between the discovery and expository higher ability groups, and also no significant difference between the three lower ability groups.

b) Urban high school: There was no significant difference in the post-test mean scores between the three higher ability groups. The modular lower ability group had significantly higher mean score than the expository lower ability group. There was no significant difference in the post-test mean score between the modular and discovery lower ability groups and also no difference between the discovery and expository lower ability groups.

6. Attitudinal change by ability group

a) Semi-rural high school: There was no significant difference in the post-test mean scores between the three higher ability groups and also no difference between the three lower ability groups.

b) Urban high school: The modular higher ability group had a significantly higher post-test mean score than the expository higher ability group. There was no significant difference in the post-test mean scores between the modular and discovery higher ability groups and also no difference between the discovery and expository higher ability groups. The three lower ability groups did not significantly differ from each other.

7. Retention of acquired knowledge

a) Semi-rural high school: The modular group had a significantly higher post-post-test mean score than the discovery and expository groups. There was no significant difference in the post-post-test mean scores between the discovery and expository groups.

b) Urban high school: The modular and expository groups had significantly higher post-post-test mean scores than the discovery group.

8. Retention of developed thinking skills

a) Semi-rural high school: There was no significant difference in the post-post-test mean scores between the three groups.

b) Urban high school: The modular and discovery groups had significantly higher post-post-test mean scores than the expository group. There was no significant difference between the modular and discovery groups.

9. Retention of changed attitude

a) Semi-rural high school: There was significant difference in the post-post-test mean scores between the three groups.

b) Urban high school: There was no significant difference in the post-post-test mean scores between the three groups.

10. Retention of acquired knowledge by ability group

a) Semi-rural high school: There was no significant difference in the post-post-test mean scores between the three higher ability groups and also no difference between the three lower ability groups.

b) Urban high school: There was no significant difference in the post-post-test mean scores between the three higher ability groups. The modular lower ability group had significantly higher post-post-test mean score than the discovery and expository lower ability groups. There was no significant difference in the post-post-test mean scores between the discovery and expository groups.

11. Retention of developed thinking skills by ability group

a) Semi-rural high school: There was no significant difference in the post-post-test mean scores between the three higher ability groups and also no difference between the three lower ability groups.

b) Urban high school: There was no significant difference in the post-post-test mean scores between the three higher ability groups. The discovery lower ability group had significantly higher post-post-test mean score than the modular and expository lower ability groups. There was no significant difference in the post-post-test mean scores between the modular and expository lower ability groups.

12. Retention of changed attitude by ability group

a) Semi-rural high school: There was no significant difference in the post-post-test mean scores between the three higher ability groups and also no difference between the three lower ability groups.

b) Urban high school: The modular higher ability groups had significantly higher post-post-test mean scores than the discovery higher ability group. There was no significant difference in the post-post-test mean scores between the modular and expository higher ability groups, and also no difference between the discovery and expository higher ability groups.

The findings of this study as arrived at from the testing of hypotheses point to the following conclusions:

1. The modular approach is better in acquiring knowledge, in developing thinking skills, and in changing attitude than the discovery and expository approaches.

2. The modular approach is better in retention of the acquired knowledge than the discovery and expository approaches.

3. The modular approach is as good, if not better, as the discovery and expository approaches in retention of the developed thinking skills and changed attitude.

4. There seems to be a tendency for the lower ability students of the modular group in the urban setting to acquire and retain knowledge more; while the higher ability students of the modular group in the semi-rural setting acquire knowledge and develop thinking skills more.

DESCRIPTORS: *Inquiry Approach; Modular Approach; Expository Approach; Philippines*

SOURCE: Population Education Clearing House
Unesco Regional Office for Education in Asia and the Pacific
P.O. Box 1425, General Post Office
Bangkok, Thailand

C. Other Studies

THAILAND

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Kanchana Detchai. *A comparative study of teaching outcomes in population education focusing on problems of population growth in Prathomsuksa 6 through the inquiry method and the learning-centred method.* M.Ed. thesis, Mahidol University, 1982. In Thai with English abstract.

OBJECTIVES

1. To compare the academic achievements of those Prathomsuksa Sixth students taught by the inquiry method vis-a-vis those taught by the learning-centred method on the unit, 'Problem of Population Growth' under a population education course.

2. To study the students' opinions regarding these two teaching methodologies in terms of students' interest, knowledge gained and time spent.

METHODOLOGY

Sample: Students of Suansanuk Municipal School, Amphur Moeng, Khonkaen Province, randomly selected and divided into 3 groups. Each group consisted of one class of Prathomsuksa Sixth students. The first two groups were the experimental groups; one group was taught by Inquiry Method while the other was taught by the Learning-Centred Method. The last group was the control one which was not given any Population Education course.

FINDINGS

1. There were no statistically significant differences between the academic achievements of the two experimental groups.

2. There were statistically significant differences at the .01 level between the two experimental groups and the control group.

3. The students in both experimental groups showed favourable opinions toward the two experimental teaching methodologies.

DESCRIPTORS: *Inquiry Approach; Learning-Centred Approach; Thailand*

SOURCE: Director
Population Education Project
Department of Education
Faculty of Social Science and Humanities
Mahidol University
25/25 Moo 5, Tambon Salaya
Amphor Nakhon Chaisri
Nakhon Pathom 73170
Thailand

Section Five

EVALUATING CLASSROOM INSTRUCTION

Section Five

EVALUATING CLASSROOM INSTRUCTION

A. Analysis of the studies

The population education programme has been established in Asia and the Pacific for a little over a decade. Countries are at various stages of implementation using various modalities for instituting population education in the schools. China, India, Malaysia, the Philippines, the Republic of Korea and Thailand have found it feasible to introduce population education at all levels of education including tertiary. Countries such as Bangladesh, Indonesia, Nepal, Pakistan, Sri Lanka and a few countries in the Pacific have decided to introduce it only at the elementary and secondary level. While most countries teach population education in grade IV, some countries like India, Pakistan, the Philippines and Thailand encountered no objection in introducing it in grade I. In teaching population education, countries have also used various methods and approaches. Most countries have preferred to use the integrated approach at the elementary level - this means incorporating population education content into various subject areas such as mathematics, social studies, health, geography, biology and home economics either by infusion or a mini-unit approach. At the secondary level, population education is almost always introduced as a separate course. The same is true at the college level.

After a number of years of teaching population education, some countries have seen the need to evaluate the impact of classroom teaching on the knowledge, attitude and behaviour of the students, and in the process determine whether the various components of teaching population education such as the objectives, content, activities, methodologies, time allocation, reading or reference materials and visual aids, and tests facilitate more efficient and effective teaching of population education.

In this section, 19 studies have been gathered from India (seven), the Philippines (four), Thailand (four), Bangladesh (two), Indonesia (one) and the Republic of Korea (one). The studies were undertaken over the 12 years from 1970 to 1982. Out of these 19 studies, 12 evaluate the effectiveness of the population education instruction in terms of changes in students' knowledge, attitude and behaviour using the experimental design. The remaining seven studies are descriptive-normative studies aimed at evaluating any or all components of the classroom instruction such as the suitability of content and objectives, manner of introduction, level of difficulty, understandability and clarity of content and activities, sufficiency and appropriateness of activities, adequacy and suitability of teaching methodologies and adequacy of time allocation. The experimental studies used two approaches: (a) a single-group approach where one group only is exposed to the population education instruction and the results determined by using pre- and post-tests, comparing the difference in results to find out if there are gains after the application; and (b) a two or more group approach with various combinations of treatments. For instance, at the simplest level, one

group is exposed to the population education course and the control group is not, after which post-tests are given to both groups to determine the difference in results in terms of changes in knowledge, attitude and behaviour. Some studies used more than two groups - two experimental groups and one control group. Usually, the two experimental groups are exposed to population education instruction but using two different approaches. For example, Group A is taught by formal instruction aided by a prepared curriculum material, Group B is exposed only to the prepared curriculum material without the formal instruction and Group C is exposed to neither. Another common experimental grouping is the comparison between a group taught with population education as integrated into various subject areas as against a group to which population education is given as a separate course as against a third group receiving no treatment at all.

Four of these experimental studies looked into the various intervening variables such as age, sex, number of siblings, occupation, education, residence, religion, I.Q., whether rural or urban and the like to determine if any or all of these factors influence changes in knowledge, attitude and behaviour after exposure to population education. The samples of respondents of the studies ranged from elementary to college students and teachers but mostly included the students in the secondary level.

There are very few studies in this field compared with the many years that population education has been carried out in schools. This indicates the lack of importance that countries have placed on finding out the impact of their programme on their target audiences. The significance of this type of evaluation cannot be over emphasized especially considering the money, time and effort that have gone to developing materials and training teachers, all aimed at facilitating more effective teaching of population education and ultimately creating changes in the knowledge, attitude and behaviour of the students.

Nevertheless, based on these few studies, the following broad generalizations can be made:

1. The four studies which used the one-group approach revealed that after exposure to the population education instruction, the group's knowledge usually changed positively. However, when a group exposed to population education was compared with another group which did not receive the population education instruction or to another group which was given the instruction using a different approach, conflicting results were revealed. For example, while three studies have shown the superiority of the groups receiving population education instruction in knowledge gain, two studies have shown other results. One study showed that both experimental and control groups were equally effective in bringing about a change in knowledge. Another study even showed that the group who attended a school that did not offer the subject did significantly better than a group that was exposed to it and a group that was not exposed to it in a school that offered the subject.

2. When determining the effectiveness of one approach or another in teaching population education, conflicting conclusions also resulted. One study showed the integrated

approach as more effective than the separate approach but another study showed the reverse. When compared to a third group receiving neither the integrated nor the separate approach, both the integrated and the separate approaches were found effective in increasing knowledge.

3. The few studies that dealt with intervening variables showed that all except I.Q. significantly accounted for changes in knowledge after exposure to population education instruction.

4. The evaluation of the various components of population education instruction resulted in both good and bad points. The studies have generally shown that the materials used in teaching population education were within the level of the students' comprehension and the objectives were suited to the content and current situation and easily implementable. However, many studies also found that reading and reference materials, teachers' and pupils' guides were inadequate and the time allotted for their teaching insufficient. Classroom activities and exercises were also found inadequate and sometimes difficult to undertake as students were not prepared to learn by the problem-solving method. Two suggestions specified that curriculum materials should be enlarged and localized or revised to reflect local content. One study found that the content was spread too thinly over too many subject areas and recommended the use of the unit approach rather than the permeation approach because it made the teaching of population education content fragmentary and incoherent.

Summary of research trends and implications

The research studies included in this section yielded so many mixed and conflicting findings that it is impossible to present any useful generalizations or predict present or future trends with regard to the effectiveness of population education instruction in increasing knowledge among the students. There is a need for more experimental studies to be undertaken to compare the effectiveness of the population education instruction with other kinds of instructions. These studies could include a correlation of the factors or intervening variables which affect or account for the differences in the results. One of the weaknesses of the studies included in this section is that they failed to explain why both students who were exposed to population education instructions and those who were not, equally increased their knowledge on population education and worse, why one study showed students who were not exposed to population education in the classrooms gained more knowledge than those who received the instruction.

While the small size of the sample may be one of the reasons for these conflicting findings, it is feared that other factors which are not within the control of the researcher also contributed to these effects such as teacher competence, the short duration of the instruction and the quality of the curriculum and teaching aids.

While a few studies showed that the intervening variables such as age, sex, number of siblings, occupation,

educational level, religion, socio-economic status and whether rural or urban, significantly accounted for changes in knowledge after exposure to population education instruction, other more significant variables such as teacher competence, administrative support and the general environment need also to be considered in the research.

B. Exemplary studies

BANGLADESH

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Ministry of Education and Religious Affairs (Education Division). Population Education Programme. *Evaluation of knowledge base and change in knowledge of the students of classes IV and V in population education.* Dhaka, 1980. 18 p.

OBJECTIVES

1. To determine the level of knowledge of students of Classes IV and V regarding population facts and issues at the beginning of the school year, January, 1979.

2. To determine the extent of change in knowledge of the students of Classes IV and V regarding population facts and issues at the end of the school year, December, 1979.

3. To compare the extent of change in the level of population education knowledge of students of Classes IV and V using general content and those using content with which population has been integrated.

METHODOLOGY

Sample: 279 students from Class IV and 278 from Class V. One thana from each district where training of primary teachers had been completed, was randomly selected. One primary school from each selected thana was also randomly selected.

Data collection and analysis technique: A set of four tests (pre-test and post-test) for each class were administered:

1. A knowledge test in Bengali comprising an equal number of items from two prose pieces of similar size and difficulty level - one which contained matters related to population education and the other which did not.

2. Tests of knowledge in mathematics, general science and social science comprising an equal number of items from both general content and the content in which population education has been integrated.

Use of gain scores from pre- and post-tests to the target-groups in the classroom in their respective districts were used to analyse the data.

FINDINGS

1. In a large majority of the cases, the mean gain scores on population education content integrated in different subject areas for both Classes IV and V were positive, indicating that the introduction of population education in Classes IV and V had brought about desirable changes in terms of gain in the knowledge base.

2. Substantial mean gain scores were found in 19 cases in Class IV and 13 cases in Class V regarding population education content integrated in different subject areas.

3. Substantial mean gain scores were found in 12 cases in Class IV and 11 cases in Class V regarding general content of different subject areas.

The negative and low mean gain scores found in many cases were perhaps due to many other factors which invite further investigation.

4. In Class IV the mean gain scores on population education content in the four subjects were higher than those on general contents. In the case of Class V, mean gain scores on population education content were lower than those on general contents. The reason for the reversal of the results in the case of Class V is due to their higher knowledge base on subject content relating to population education at the time of pre-test.

On an average the test results tend to indicate that the knowledge base of the students of Classes IV and V has generally been widened during the year following the introduction of population education.

5. In terms of the overall mean gain scores, students of Class IV scored higher in Bengali and social science where population education content is integrated than in those which did not contain any population education content at all. But the overall mean gain scores in the area of population education content for Class V were found to be lower than those in general content.

This is because the respondents in Class V had higher knowledge base before the class started compared with students in Grade IV.

DESCRIPTORS: *Population Awareness; Student Attitudes; Primary School Students; Bangladesh.*

SOURCE: Executive Director
Population Education Programme
Ministry of Education and Religious Affairs (Education Division)
House No. 62, Road No. 7/A (New), Dhanmondi R.A.
Dhaka-9, Bangladesh

BANGLADESH

78

Ministry of Education and Religious Affairs. (Education Division). Population Education Programme. *Evaluation of the different aspects of population education curriculum for teachers' training college in Bangladesh.* Dhaka, 1980. 20 p.

OBJECTIVES

1. To provide adequate information for necessary modification of the existing population education curricula with the end in view of establishing the inclusion of the teaching of population education in the teacher training colleges as a sound academic course.

2. To assess the achievement of knowledge of the students on population education.

3. To assess the change in attitude of the students towards population issues and population

education.

4. To elicit opinion of the students on different aspects of population education curricula.

5. To elicit opinion of teachers of the Teachers' Training Colleges on different aspects of population education curricula.

METHODOLOGY

Sample: 885 B. Ed. students and nine teachers in five teachers training colleges in Bangladesh. In case of knowledge and attitude test those students who were not present either in pre-test or in the post-test, were not considered as eligible sample. But in case of opinion all the students were counted as a valid sample. The teachers who were also involved in teaching population education were included in the survey.

Data collection and analysis technique: (a) Student knowledge test; (b) student attitude test; (c) student opinionnaire; and (d) teacher questionnaire. Two tests (knowledge and attitude) were administered among the students, once at the beginning of the academic session and again at the end of the session. The opinionnaire for the students was given at the end of the session only. The teachers were to respond to their questionnaire at the end of the session only. Data were analysed by percentage distribution and mean score.

FINDINGS

1. The knowledge test showed that all of the students had a very low level of knowledge of population education at the beginning of the session. But at the end of the session, the post-test mean scores indicated that the achievement in knowledge did not reach the level of expectation.

2. The groups with a poorer initial knowledge base tended to make larger gains in knowledge and exceeded the ones with initial higher scores in the post-test.

3. The students initially showed quite favourable attitudes and this increased a little after being exposed to the population education class.

4. It is also notable that the groups with initial lower scores tended to score higher in the post-test.

5. a) A little over 50 per cent found the volume of the syllabus included in the curriculum adequate but a clear majority said that the syllabus was not sufficient in generating clear knowledge in population education.

b) Most of the respondents did not have sufficient reading materials on population education.

c) The majority of respondents felt that the time allotted for the purpose of teaching population education was insufficient.

d) The majority felt that their personal thinking in relation to population control was influenced by the knowledge acquired regarding population education.

6. a) The majority of the teachers stated that reading materials on population education were

insufficient.

b) Most teachers used the lecture method followed with classroom discussion in teaching population education. All of them also used visual aids.

c) Most teachers did not give their students practical work.

d) A minority of the teachers found the population education curriculum relevant and appropriate but suggested that the syllabus should be enlarged and the curriculum improved.

7. The poor knowledge of both the teachers and students was due to the fact that population education was not given emphasis because it was not a part of the final examination.

DESCRIPTORS: *Teacher Training Curriculum; Teacher Attitudes; University Teachers; Student Attitudes; University Students; Bangladesh.*

SOURCE: Executive Director
Population Education Programme
Ministry of Education and Religious Affairs (Education Division)
House No. 62, Road No. 7/A (New)
Dhanmondi R.A., Dhaka-9
Bangladesh

INDIA

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Faneuff, C.T. *Population education: utilization of the semantic differential technique for measuring attitude change in the schools of Mysore State, India.* Chapel Hill, Carolina Population Center /1971/. 7 p. typescript.

OBJECTIVES

1. To determine change in knowledge and attitude of Standard 9 students towards population issues after being exposed in a population dynamics curriculum.

2. To determine if the sample's change in knowledge affected change in attitude towards population issues.

3. To determine whether sex, I.Q., rural-urban environment and methods of instruction variables have effects on the change in knowledge and attitude towards population problems.

METHODOLOGY

Sample: 440 experimental and 200 control students of Standard 9 selected from 12 schools (six urban, six rural) situated in Bangalore and Mysore States. The 12 classes were divided equally among boys and girls and further divided among urban and rural. Four classes (urban male, urban female, rural male and rural female) received the experimental curricula (consisting of 15 forty-minute lessons centred around five topics in population-related areas) following the traditional approach (lecture method). Four other classes received the experimental curricula

following the non-traditional (informal) teaching method. Four classes (two urban and two rural) served as the study control. In each of the eight schools receiving the experimental curriculum, one higher and one lower grade served as contamination samples to evaluate the extent of information 'leakage' to non-experimental students.

Data collection and analysis technique: Population dynamics achievement test. This test was applied to the sample one week before and one week after the experiment. To analyse the knowledge results, a 2 x 3 x 2 factorial fixed effects analysis of variance was used. To analyse the attitude change, Semantic Differential was used.

FINDINGS

1. Both formal and informal treatments were effective in producing a significant information gain whereas the superiority of one treatment over the other could not be determined.

2. The informal groups outgained the formal groups in terms of attitude. The method had effects on attitude change but not on cognitive change.

3. There was no evidence that sex was a factor in information gain by itself, or across treatment effect.

4. The rural group showed a significantly superior gain than the urban group (although not true in the experimental group).

5. More students from the rural areas and those who were born early had a proven positive attitude toward population issues.

6. There was no significant relationship between attitude and intelligence. I.Q. scores varied positively with attitude scores at the time the study began but showed no significant variation with attitude gain.

7. Neither pre- or post-attitude scores showed any significant relationship with the amount of information gained. Moreover, none of the achievement measures showed any relationship with attitude gain. This can also be looked upon as reinforcement of some social-psychologists theory that attitudes and achievements can be independent variables.

DESCRIPTORS: *Student Attitudes; KAP; Secondary School Students; India.*

SOURCE: Population Education Clearing House
Unesco Regional Office for Education in Asia and the Pacific
P.O. Box 1425, General Post Office
Bangkok 10500, Thailand

INDIA

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Parameswarappa, S. *An experimental study to compare the effectiveness of holistic method with the integrated method of teaching population education at the secondary schools.* M. Ed. Thesis, Karnataka University, 1975. Unpublished.

OBJECTIVES

The main objective of the study was to find out whether population education can be taught more

effectively through the holistic or the integrated method. In specific terms, the objectives were to find out:

1. whether the holistic method would show a significant information gain;

2. whether the integrated method would show a significant information gain;

3. whether the control group would show a significant information gain;

4. whether the integrated method would show any significant information gain over holistic method;

5. whether the holistic method would show any significant information gain over control group;

6. whether the integrated method would show any significant information gain over control group.

METHODOLOGY

Sample: Three groups of students, 30 from each group from Standard 9 matched with respect to scholastic achievement, intelligence and socio-economic status, from three schools.

Data collection and analysis technique: Group One, taught by the holistic method; Group Two by the integrated method; Group Three, control group. Questionnaire during pre- and post-tests. Unit lessons for each method, covering the following topics:
(a) problems of population growth;
(b) causes of population growth;
(c) effects of over-population; and
(d) remedies to population problems.
The same teacher taught the lessons by the two methods. The data collected were analysed statistically.

FINDINGS

1. Both the integrated and holistic methods produced significant information gain.

2. The control group did not show any significant information gain.

3. The integrated method produced a more significant information gain than the holistic method.

4. The holistic method produced a significant information gain over the control group.

5. The integrated method produced a significant information gain over the control group.

This proves that both the teaching methods are effective even though the degree of effectiveness varies.

The thesis upholds the superiority of the integrated method over the holistic method in teaching population education at secondary schools.

DESCRIPTORS: *Teaching Strategies; Integration Approach; Separate Discipline; India.*

SOURCE: Head
Population Education Unit
National Council of Educational Research and Training
Sri Aurobindo Marg
New Delhi- 110016
India

INDONESIA

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Institute of Teacher Training and Educational Sciences (IKIP), Malang. Team for the Development of Population Education. *An experimental study of the application of the monolithic approach to population education in the second-year class of some senior high school students in the city of Malang*. Malang, IKIP with co-operation of Ford Foundation (Jakarta), 1978. 81 p.

OBJECTIVES

1. To compare the effectiveness of two different teaching approaches in population education: the integrated approach and the monolithic approach as applied in the teaching of population education in the senior high school level.

2. To determine the extent to which the integrated approach has been applied in accordance with the 1975 curriculum programme.

3. To assess the probable advantage and/or disadvantage of applying the monolithic approach.

4. To assess the relative advantage and/or disadvantage of the monolithic approach compared with the integrated approach.

METHODOLOGY

Sample: Two second year classes from two senior high schools, taken as representative of all the senior schools in Malang; one as the experimental group and the other as the control group. The experimental group was taught materials in population education by members of the teaching team, using the monolithic approach (a separate subject). The control group was taught the same material on population education by their regular teachers, using the integrated approach (integrated with Pancasila, religion, social studies and language).

Data collection and analysis technique: Quasi-experimental, using non-randomized control group, pre- and post-tests administered on both the experimental and control groups. The data were analysed to determine level of knowledge; mean and standard deviation; correlation with the GPA, item analysis and split-half reliability of analysis.

FINDINGS

1. The means of the pre-test score were between 9.05-11.34, which implied that the students had adequate knowledge of population education included in the 1975 curriculum. It also showed that the curriculum has been implemented in these schools.

2. The statistical analysis of the post-test showed the following difficulty level: 44 per cent classified as easy, 40 per cent difficult, and 16 per cent very difficult, from which it can be concluded that the test was sufficiently appropriate for the experiment. The fact that the experimental group obtained a higher score than the control group proves that other things being equal the monolithic approach is more effective than the current integrated approach.

3. It is also possible that the relatively low mean obtained by the control group might be due to some

weaknesses in the implementation of the integrated approach.

DESCRIPTORS: *Teaching Strategies; Integration Approach; Separate Discipline; Indonesia.*

SOURCE: Population Education Development Team
IKIP-Malang
Jalan Surakata 7G
Malang, Indonesia

PHILIPPINES

82

Ministry of Education and Culture. Population Education Program. *The relative effectiveness of the integrated and mini course approaches in the teaching of population education in grades I to VI in the Division of Nueva Ecija.* Manila, 1977.

OBJECTIVES

To compare the relative effectiveness of the two strategies (Integrated and Mini-Course) on pupil achievement and attitude.

METHODOLOGY

Sample: Two central schools and two complete barrio elementary schools in two pilot districts, Munoz and Gapan. Two groups of classes were organized in each grade level (Grades I to VI) in these schools.

Random selection of students after being equated on the basis of age and sex. The teachers were equated on the basis of the following variables: length of teaching experience, age, educational qualifications, performance ratings, civil service eligibility and civil status.

The control group taught under the integration approach used the Teacher's Guides where population education sub-units are integrated in the five subject areas, namely: social studies, science, mathematics, health education, and home economics. The experimental group, taught under the mini-course approach, used the restructured Teacher's Guides.

Data collection and analysis technique: Pre-test and post-test on knowledge administered at the beginning and at the end of the study while a post-test for attitude was given to the pupils.

FINDINGS

1. On the whole, there was a significant difference between the scores of pupils taught under the integrated approach and those taught under the mini-course approach for all grade levels. The groups taught under the mini-course approach performed better in the knowlege test for population education.

2. On the whole, there was a significant difference between the attitude of pupils taught under the integrated approach and those taught under the mini-course for all grade levels. The groups taught under the mini-course approach performed better in the attitude test for population education.

DESCRIPTORS: *Teaching Strategies; Integration Approach; Separate Discipline; Philippines.*

SOURCE: Chief
Population Education Program
Ministry of Education,
Culture and Sports
Arroceros Street
Manila, Philippines

PHILIPPINES

83

Paik, Hyun Ki. *A field try-out of population education curriculum materials for teacher education programmes - an experimental study: a case of the Philippines.* Bangkok, Unesco Regional Office for Education in Asia and the Pacific, 1973. 11 p. mimeo.

OBJECTIVES

The study sought to test the following hypotheses:

1. There is no difference in the performance of Experimental Group A before and after receiving formal instruction in the prepared curriculum materials on population education.

2. There is no difference in the performance of Experimental Group B before and after studying the prepared curriculum materials on population education on their own.

3. There is no difference in the performance of the Control Group who received neither training nor the prepared curriculum materials on population education.

4. There is no significant difference in the performances of the three groups in the pre-test.

5. There is no difference between the performance of the students who received formal instruction with the prepared materials on population education (Experimental Group A) and those who studied the same on their own (Experimental Group B).

6. There is no difference between the performance of Experimental Group A and of the Control Group.

7. There is no significant difference between the performance of Experimental Group B and of Control Group C.

8. There is no difference between the performance of Experimental Group A and B, and those of the Control Group.

9. There will be change in the attitudes of the students who received formal instruction with the prepared materials on population education.

10. There will be change in the attitudes among the students who received materials but did not receive formal instruction.

11. The students in the control group who had no formal instruction and did not receive materials will not manifest any change in attitudes towards the population situation.

METHODOLOGY

Sample: 75 fourth-year college students taking up courses leading to either a degree of Bachelor of Arts or Bachelor of Science in Education selected at random. The respondents were grouped into three categories: (a) Experimental Group A who received formal instruction with the prepared curriculum materials on population

education for a period of three weeks; (b) Experimental Group B received no formal instruction but given the curriculum materials which they read and studied by themselves; and (c) Control Group C who did not receive either formal instruction or the curriculum materials on population education.

Data collection and analysis technique: Pre- and post-tests were administered to all the respondents before and after the experiment. T-test was used to analyse the data.

FINDINGS

1. The formal instruction using the prepared curriculum materials on population education resulted in a positive change in performance among the students.

2. The self-study of the prepared curriculum materials on population education produced positive gains also.

3. There was no difference in the performance of the control group which received neither training nor the prepared curriculum materials on population education.

4. The formal instruction group significantly performed better than self-study group and control group. However there was little difference between the self-study group and the control group in performance.

5. There was a significant difference in the performance between the formal instruction group and the self-study group.

6. There was a difference in the performance of the formal instruction group and the control group.

7. There was a difference between the performance of the self-study group and the control group.

8. The attitude test did not sufficiently reveal a definite change in the attitudes of the students except in the desirable marriage age for Filipino men and the average size of the Filipino family which decreased from five to three children.

9. With regard to the students, and feedback on the population education course, the following are the findings:

a) The course was interesting and challenging and the students would recommend it to friends for inclusion in their academic programmes;

b) Due to the course, a more defined awareness of the seriousness of the problem of rapid population growth in their country has been generated;

c) The majority found the unit on "Quality of Life Issues" most interesting;

d) The majority recommended that the course on Population Education be required in their curriculum.

10. With regard to the teachers' feedback on the population education course, the following are the findings:

a) The teachers indicated that the objectives of the course and the motivation of the students to participate actively in the classroom activities were both accomplished to a great extent;

b) The duration of the course should be lengthened;

c) The materials were extensive in scope;

d) The basic concepts that form the main content of the population education course and the activities in classroom and community situations were sufficient in quantity and quality to inculcate in students a deeper understanding and skills in population education.

DESCRIPTORS: *Teacher Training Curriculum; Experimental Teaching; Student Attitudes; University Students; Philippines.*

SOURCE: Population Education Clearing House
Unesco Regional Office for Education in Asia and the Pacific
P.O. Box 1425, General Post Office
Bangkok 10500, Thailand

PHILIPPINES

84

Philippine Women's University. Population Education Center. *Evaluation of PEC population education classes (1971-1972).* Manila, 1973. 18 p.

OBJECTIVES

1. To evaluate the effectiveness of population education curriculum developed by the Population Education Center on the cognitive learnings of the students who were exposed to this curriculum.

2. To determine whether there are significant differences between achievement test results of treatment and control groups.

3. To find out if the sex of students has any influence in their achievement test scores.

4. To find out if age has any influence on achievement of test scores.

5. To determine whether socio-economic status exerts significant influence on the learning of population education.

METHODOLOGY

Sample: 299 Grade VI pupils and 298 fourth year students grouped by regions and divided into two categories. The treatment groups were composed of those who were exposed to the population education curriculum and the control group consisted of those who have not had any formal instruction in population education content materials. The selected students came from 12 pilot classes in five elementary schools and three high schools located in three target areas: Central Luzon, Greater Manila Area and Visayas.

Data collection and analysis technique: Two achievement tests and an SES Level of Living Scale. Data were analysed through tests to compare between control and treatment groups, tests of correlation to investigate the relationship between age and test scores, sex, and test scores, socio-economic and test scores.

FINDINGS

1. With the exception of one fourth year group, all other treatment

groups at both elementary and high school level consistently performed well above the control groups. The significant differentials between the treatment groups and the control groups proves beyond doubt that formal instruction in population education made the difference.

2. With regard to correlation between learning and age, sex and status there were mixed findings. In the sixth grade level, sex membership and test scores were found to be independent of each other. In the fourth year groups, however, sex membership and test scores showed definite positive correlation with the girls associated with the higher scoring category and the boys with the low scoring category.

3. There is a negative correlation significant at the one per cent level between age and tests scores. In both grade VI and fourth year (high school), older students tend to get lower scores than younger students.

4. Among the sixth graders, there is a low positive correlation between socio-economic status and test scores which did not reach significance even at the 5 per cent level. On the otner hand, results from fourth year students showed high positive correlations which reached the one per cent level of significance.

DESCRIPTORS: *Curriculum Evaluation; Primary School Curriculum; Secondary School Curriculum; Experimental Teaching; Philippines.*

SOURCE: Population Education Center
Philippine Women's University
1743 Taft Avenue
Manila, Philippines

PHILIPPINES

85

Tantuan, Tructuocita R. *The implementation of the population education programme in the public elementary schools of Hilongos South District, Hilongos, Leyte as basis for upgrading the existing programme*. Tacloban City, Ministry of Education, Culture and Sports Regional Office /1982/. 43 p.

OBJECTIVES

1. To determine the effectiveness of the implementation of population education programme in the public elementary schools of South District of Hilongos, Leyte.

2. To determine the profile of the implementators of the population education programme in terms of age and civil status, teaching status, teaching experience, educational qualifications, training in population education, and experience in integrating population education.

3. To find out the status of the implementation of the population education programme in terms of objectives, content, instructional materials, strategies, activities, learning outcomes and evaluative techniques.

4. To identify problems met by teachers in implementing the programme.

METHODOLOGY

Sample: 16 schools in the Southern District of Hilongos, Leyte consisting of five primary schools and 11 elementary schools. From these schools, 123 classroom teachers

were interviewed.

Data collection and analysis technique: The descriptive-normative survey method utilizing questionnaires which were distributed to the teachers who were either teaching social studies, health, science, mathematics or home economics. These were counter checked with interviews.

FINDINGS

1. Profile of the implementors:

a) The majority of the implementors fell within the 36-40 age bracket, were married and were mostly females.

b) Sixty-nine teachers or 56 per cent of all teachers have accumulated at least 16 years of teaching experience.

c) A total of 118 teachers or 96 per cent have attended a five-day training programme on the district level. Eighty-one respondents got additional knowledge on population from leisure time reading of books, pamphlets, and magazines, from movies seen and lectures heard. Five teachers were not able to attend any in-service training on population education but they got their knowledge from other sources mentioned.

d) Of the 118 teachers who attended the one-week training programme, ten teachers acted as demonstrators in the different subject areas, while the rest were merely listeners.

e) Ninety-five or 77.2 per cent of the teachers rated their knowledge and training on population education as adequate, 25 inadequate and three as very adequate.

f) On their experiences in integration, 76 teachers did not have any difficulty in integrating population education because of the presence of population education guides and manuals, while 35 teachers found difficulty in determining when to integrate. Fifteen teachers noted that parents are lukewarm to the inclusion of sex education while 26 others noted that parents have expressed their desire that the integration of population education should start in grade I.

2. Status of implementation of the programme:

a) More than half of the objectives of the programme were implemented by the teachers. Four of these objectives were implemented by more than one half of the teachers. Only seven teachers were able to implement the objective on sexuality.

b) About one-half of the number of teachers in each grade have taken up the different topics on population education given in the guide. These topics were integrated in the four subject areas in the primary grades - social studies, health, science and mathematics and five subject areas in the intermediate grades - the four subjects already mentioned with home economics added.

c) There is an adequate supply of teaching guides and manuals as indicated by the respondents but there is insufficient supply of textbooks, references, graphs and charts, pictures and illustrations and other teaching aids and devices in population education.

d) The classroom teachers made use of the different strategies in the teaching of population studies

most notable of which are role playing, process approach, discovery approach and small group discussion.

e) The most common population activities performed by the different classes were dramatization, where pupils impersonate people, conducting inquiries on thought provoking materials as magazines, articles, pictures, maps, advertisements and posters, making scrapbooks and interviewing people.

f) The learning outcomes expressed in terms of knowledge and information were rated satisfactory by 112 or 91.2 per cent of the teachers. The learning outcomes in terms of habits and skills were rated as satisfactory by 76.4 per cent or 94 teachers. The learning outcomes in terms of attitudes and appreciation were also rated as satisfactory by 88 teachers or 71.5 per cent. The majority of the respondents rated the learning outcomes as satisfactory.

g) Of the evaluative techniques used, the most popular among the teachers was pencil and paper tests.

h) As to the degree of implementation, 109 or 87.8 per cent of the respondents gave a rating of satisfactory which means that programme implementation has met the requirements but not surpassing the criteria set nor below the set standards.

3. Lack of proper and updated training of teachers in population education and inadequate supply of textbooks, references, teaching aids and devices were the most common problems met by the teachers in the teaching of population education.

4. To improve the implementation of population education in the district under study, the teachers suggested that they must be provided with adequate and updated in-service training and a sufficient supply of textbooks, references, teaching aids and devices and to restructure the curriculum offerings to minimize overcrowding to subject matter content.

DESCRIPTORS: *Teacher Role; Primary School Teachers; Teacher Qualifications; Programme Planning; Programme Evaluation; Philippines.*

SOURCE: Ministry of Education, Culture and Sports
Region VIII
Tacloban City
Philippines

REPUBLIC OF KOREA

86

Korean Educational Development Institute. *A study on the curriculum and instructional materials for population education in elementary and middle schools; summary report of the small-scale tryout.* Seoul, 1975. 54 p. (KEDI research report No. 22).

OBJECTIVES

1. To validate the relevancy and effectiveness of the developed population education curriculum and

materials in actual classroom instruction.

2. To identify problems in applying the curriculum for classroom instruction, with special emphasis on content, time allotment, selection of related subject areas and instructional process and to obtain data, which may be useful for the improvement of their relevancy and effectiveness.

METHODOLOGY

Sample: Grades IV, V and VI of primary schools and grades I, II and III of middle schools; one primary and one middle school from each province (or special city), totalling 22 across the nation. Field surveys and consultations with teachers were conducted prior to the final selection of the schools followed by intensive training of the participating teachers. The subjects involved in the tryout were social studies, Korean history (grades V and VI); mathematics, science, physical education, home economics in middle schools.

Data collection and analysis technique: Prior to the implementation of the trial instruction, two-day training was conducted for the teachers of the pilot schools, in which they were oriented about the population content, the operational practice of population education curriculum, and instructional procedures. During the tryout period, the participating classes were required to prepare separate schedules, which provided for the instructions incorporating the population content into the relevant subject areas. Teaching and learning materials such as teachers' guides and audio visual materials for teachers and workbooks for students were used for this study.

Pre- and post-tests were conducted to measure the extent to which the instructional objectives were attained. The survey took the forms of interview, questionnaires and meeting. Classroom observations were conducted as a complementary means whenever considered necessary. The interview, survey through questionnaires, and classroom observation were conducted in accordance with the prepared formats. Data were analysed by frequency and percentage counts, mean and descriptive group comparisons.

FINDINGS

1. The number of subject areas, into which population content are infused should be reduced to provide a more intensive coverage of the content in a smaller number of areas. Most of the teachers held the view that the population content is thinly spread over too many subject areas, making it difficult to provide for integration, and that there is a substantial risk of reducing the effects of population education.

2. Training was seen to be one of the best ways to change awareness, knowledge and attitudes of teachers about population education. This would develop favourable attitudes and sufficient knowledge in the teachers and make teaching population education in the classroom more effective.

3. Efforts should be made to avoid the permeation approach as much as possible because population content, thinly spread over many differ-

ent subjects, tends to be fragmentary and devoid of a coherent structure that would assure meaningful learning. Furthermore, the permeation approach increases the risk of reducing the relevancy of population content to those of the existing ones.

4. The unit approach appeared to be better fitted in the middle and high schools than primary schools. In view of the characteristics of subject areas the unit approach is expected to yield better effects in social studies, physical education, natural science, and home economics (practical arts).

5. Audio-visual materials bearing upon population education should be developed to improve the learning outcomes of population education.

6. Efforts should be made to fully reflect regional disparities in the process of developing a population education curriculum. Population education would then meet the unique needs of each region. This stems from the finding that the population problem was perceived differently from region to region and that even the same content was interpreted in different perspectives. Most of the students in urban areas took population problem as a serious issue facing mankind, whereas their counterparts in rural areas were not so sensitive to the issue.

DESCRIPTORS: *Curriculum Evaluation; Instructional Materials Evaluation; Content Analysis; Primary Grades; Secondary Grades; Republic of Korea.*

SOURCE: Chief
Population Education Project
Korean Educational Development Institute
20-1 Umyeon-Dong
Gangnam-Gu, Seoul 135-00
Republic of Korea

THAILAND

87

Supavan Charoenkan. *Knowledge and attitudes towards Thailand's population growth among higher secondary school students in Bangkok.* M. Ed. thesis Mahidol University, 1979. 145 p. Unpublished. In Thai with English abstract.

OBJECTIVES

To compare the knowledge of and attitudes toward Thailand's population growth between the students who have completed population education course and those who had never taken the course, and to find out and compare the correlation between knowledge and attitudes of these students.

METHODOLOGY

Sample: 1,500 selected students of selected higher secondary schools in Bangkok. The students were divided into three 500-student groups: the first group had completed a population education course, the second had not taken the course in the schools that offered it, and the third, as the control group, were from schools that never offered the course.

Data collection and analysis instrument: Questionnaires.

FINDINGS

1. The students who had and had not taken the course had average knowledge about Thailand's population growth but they also had negative attitudes.

2. There was no statistically significant difference of knowledge at the 0.05 level between the groups of students who had and had not taken the course in the schools that offered it. The students who had not taken the course in the schools that never offered it had significantly higher knowledge than the groups who had and had not taken the course in the schools that offered it at the 0.05 level. The research results rejected the hypothesis that: "The students who had taken the course have higher knowledge of Thailand's population growth than the students who had not taken the population education course".

3. The students who had and had not taken the course had no statistically significant difference of attitudes toward Thailand's population growth at the 0.05 level. The research result rejected the hypothesis that: "The students who had attitudes toward Thailand's population growth than the students who had not taken the population education course".

4. When the variables of sex, educational programme, religion, father's occupation, mother's occupation and the number of sibling were controlled, the students who had and had not taken the course had no statistically significant difference of knowledge at the 0.05 level. The research result rejected the hypothesis that: "When the variables of sex, educational programme, religion, father's occupation, mother's occupation and the number of sibling were controlled, the students who had taken the course had higher knowledge of Thailand's population growth than the students who had not taken the population education course".

5. When the variables of sex, educational programmes, religion, father's occupation, mother's occupation, and the number of sibling were controlled, the students who had and had not taken the course had no statistically significant difference in attitudes toward Thailand's population growth at the 0.05 level. The research result rejected the hypothesis that: "When the variables of sex, educational programme, religion, father's occupation, mother's occupation and the number of sibling were controlled, the students who had taken the course have more favourable attitudes toward Thailand's population growth than the students who had not taken the population education course".

6. The students who had taken the course had statistically significant positive correlation at the 0.01 level between knowledge of and attitudes toward Thailand's population growth. The research result accepted the hypothesis that: "The students who had taken the course have positive correlation between knowledge of an attitude toward Thailand's population growth".

7. The students who had not taken the course had statistically significance of positive correlation

at the 0.01 level between knowledge of and attitudes toward Thailand's population growth. The research result accepted the hypothesis that: "The students who had not taken the course have positive correlation between knowledge of and attitudes towards Thailand's population growth".

8. The students who had taken the course had higher positive correlation between knowledge of and attitudes toward Thailand's population growth than the students who had not taken the course at the 0.05 level. The research result accepted the hypothesis that: "The students who had taken the course have higher positive correlation between knowledge and attitudes toward Thailand's population growth".

DESCRIPTORS: *Student Attitudes; Secondary School Students; Population Awareness; Thailand.*

SOURCE: Director
Population Education Project
Department of Education
Faculty of Social Sciences and Humanities
Mahidol University
25/25 Moo 5, Tambon Salaya
Amphor Nakorn Chaisri
Nakhon Pathom 73171
Thailand

C. Other Studies

INDIA

88

Bhatwadeker, Prabha and Sarah Israel. *Family life education programme in a co-education school.* Bombay, Demographic Training Centre, 1972. (Published in Journal of Family Welfare, Vol. 16, no. 2, December 1970.)

OBJECTIVES

To determine the effectiveness of the Family Life Education Programme in a co-education school in terms of the following objectives:

1. To create a wholesome healthy attitude towards sex from childhood.

2. To satisfy the needs of growing children and to help them through childhood and puberty.

3. To correct the mis-conceptions and alleviate some of the common worries which may arise during physical development.

4. To create an awareness of the responsibilities in a family and accept family life as a career.

METHODOLOGY

Sample: Students of grades IX and X in eight girls high schools in Bombay.

Data collection and analysis technique: The experiment was tried with the help of voluntary social workers who were given a short term orientation course of one week's duration in family life education and with the co-operation of parents and teachers. The students were encouraged to ask questions pertaining to sex and family life. A pre- and post-test was administered.

FINDINGS

1. The programme helped develop a congenial atmosphere in the co-educational school situation.

2. There was a positive gain in knowledge after the educational programme.

3. There is a need for a Family Life Education programme both for boys and girls.

4. The children are keen and eager to learn about the facts of life.

5. It would be effective to integrate sex and family life education through other school subjects.

DESCRIPTORS: *Family Life Education Programme; Co-educational Schools; India.*

SOURCE: Head
Population Education Unit
National Council of Educational Research and Training
Sri Aurobindo Marg
New Delhi-110016
India

INDIA

89

Gangrade, K.D. *Population education for university youth - a research-cum-action study.* New Delhi, Family Planning Foundation of India, 1975.

OBJECTIVE

1. To develop an appropriate methodology for introducing population education in colleges.

2. To ascertain the knowledge, attitudes and perception of parents, teachers and students towards introduction of population education in colleges.

3. To develop a model syllabus in population education at the university level.

4. To formulate a national plan of action for population education.

METHODOLOGY

Sample: Students of undergraduate colleges of Delhi University specialising in arts, science and commerce. A multi-stage sampling procedure was followed in five stages: 50 students were selected from each of the four sample colleges (two women's colleges and two co-educational colleges), of a total of 200 students. Also 200 parents of these students, (113 fathers and 87 mothers) and 94 teachers were involved in the study at various stages.

Data collection and analysis technique: An action programme of exhibition, film show, debate and lecture - all related to various facets of population education was developed for the students. The reaction of the students, parents and teachers was obtained by means of a questionnaire and also followed by the interview.

FINDINGS

1. An action oriented programme in population education should have the following media component at the university stage.

a) Seminar - Population Education for University Youth

b) Exhibition - demography aspects of population explosion

c) Filmshow - population explosion

d) Lecture on sex education - The reproductive system and the

development of proper values about sex.

e) Inter-College Debate - growing population as a deterrent to the growth of the country.

f) Paper Reading - The role of youth in solving the population crisis.

g) Lecture - social, economic and political aspects of population explosion.

h) Debate - population is detrimental to development.

2. The content of population education at the university stage should comprise the following topics:

a) demographic trends, their determinants and consequences

b) social and economic development and population.

c) sociological factors and human population growth

d) social community and family organization

e) human reproduction, family life and inter-personal relationship

f) family size norms

g) basic values and the quality of life for human progress.

DESCRIPTORS: *Introductory Approach; KAP: Parent Attitudes; Student Attitudes; University Students; Teacher Attitudes; University Curriculum; India.*

SOURCE: Population Education Unit
National Council of Educational Research and Training
Sri Aurobindo Marg
New Delhi-110016, India.

INDIA

90

Parikh, K.O. *An experimental study in correlated teaching of population education in a secondary school.* Synopsis of the M. Ed. thesis, M.S. University of Baroda, 1972. 8 p. Unpublished.

OBJECTIVES

To determine whether the experimental teaching of population education affects the attitudes, knowledge and understanding of the school children of standard 10 towards population problems and family size.

METHODOLOGY

Sample: 200 boys and girls students of standard 10 from two schools in Baroda.

Data collection and analysis technique: Five teaching units in geography (social studies) were prepared for integration of population

concepts. This was applied on the respondents. The one group pre-test and post-test design with minimal controls was applied for this experiment. Before the teaching of every unit, a pre-test was administered to the sample to test their previous knowledge and attitude and the post-test was applied after the experiment. The difference between attitude scores and knowledge scores were compared statistically for significance.

FINDINGS

1. There was a positively significant difference in knowledge and understanding about population issues after the teaching of population education.

2. There was a positively significant difference in attitude towards the population issues after the teaching of population education.

DESCRIPTORS: *Student Attitudes; Secondary School Students; India.*

SOURCE: Director
Population Education Centre
Faculty of Education and Psychology
M.S. University of Baroda
Baroda-2, Gujarat
India

INDIA

91

Robinson, R.A. *Effect of teaching population education on the population awareness of students of standard VII.* M. Sc. (Home Science) thesis, Baroda University, 1975. Unpublished.

OBJECTIVES

1. To find out the effects of teaching population education on the awareness of the students regarding population problems.

2. To find out the difference in achievement of the students according to their sex, family size and parents education.

METHODOLOGY

Sample: A purposive sample of 27 students of standard 7 of Central School, Baroda.

Data collection and analysis technique: Single group experimental design. Five lessons were taught in each of the five selected areas of population.

A short-answer objective type pre-test and the same test used as a post-test. A check list was also administered to find their opinion of the experimental teaching.

FINDINGS

1. There was significant difference between the achievement of the students as tested by the pre-test and post-test in the areas of population growth and social problems. The teaching of population education increased the total awareness of the students regarding population problems in these areas.

2. Whereas 81.4 per cent of the students were found interested in learning about population problems, 66 per cent did not want to learn about sex and family planning.

4. The teachers were of the opinion that the five lessons developed on population education can be easily understood by the students of standard 7 and 66 per cent were of the opinion that knowledge of sex and family planning should not be taught at this level.

DESCRIPTORS: *Population Awareness; Student Attitudes; Secondary School Students; India.*

SOURCE: Head
Population Education Unit
National Council of Educational Research and Training
Sri Aurobindo Marg
New Delhi-110016, India

INDIA

92

Thakore, Rashmin. *Developing a curriculum in population education for secondary teachers under training.* Ph. D. dissertation, Gujarat University, 1979.

OBJECTIVE

To develop a curriculum in population education for secondary teachers under training and to evaluate the effectiveness of the curriculum in the normal setting of a secondary teachers training college.

METHODOLOGY

Sample: 200 teacher trainees of the Secondary School Teachers Training College, Ahmedabad.

Data collection and analysis technique: Curriculum model covering 10 content areas of knowledge on different aspects of population together with different co-curricular activities reflecting the message of population education.

FINDINGS

Though the study was mainly concerned with developing a curriculum, it also reflected the method of implementing the programme. The ten topics included in th model could be taught in 20 periods of 40 minutes each, thus covering each topic in two periods. It also revealed that another 10 periods are required for imparting the message through co-curricular activities. Thus the programme can be covered in 30 periods of 40 minutes duration spread over in an academic year.

DESCRIPTORS: *Teacher Training Curriculum; Secondary Teacher Training; India.*

SOURCE: Population Education Unit
National Council of Educational Research and Training
Sri Aurobindo Marg
New Delhi-110016
India

THAILAND

93

Prasert Tongsavai. *Problems of learning-teaching population education in higher secondary level.* M. Ed. thesis, Mahidol University, 1978. 170 p. Unpublished. In Thai with English abstract.

OBJECTIVES

To evaluate population education classes in higher secondary level

specifically determining the problems met in learning-teaching activities, objectives, content, instructional materials used and its evaluation.

METHODOLOGY

Sample: 140 teachers and 521 students.

Data collection analysis and technique: Two sets of questionnaires for teachers and students.

FINDINGS

1. The objectives of the course were found consistent with the prescribed content and suitable to the current Thai social situation in Thailand.

2. The level of difficulty, scope of content and time allotment were also found suitable for higher secondary students.

3. The teachers found difficulty in selecting appropriate instructional methods relevant to the specified teaching-learning objectives.

4. There were some duplication between certain population education topics and other subject areas.

5. Lecture was the most frequently used teaching method.

6. Teachers rated their problems from the more to the less serious ones as: inadequate supervision, overload teaching responsibility, and students' and teachers' apathetic attitude towards population education.

7. Both students and teachers expressed their problems in finding convenient reference and instructional materials.

8. Tests to evaluate students' gain in knowledge were not considered difficult by the teachers but students' answers were not satisfactory.

DESCRIPTORS: *Classroom Research; Secondary Grades; Thailand.*

SOURCE: Director
Population Education Project
Department of Education
Faculty of Social Sciences and Humanities
Mahidol University
25/25 Moo 5, Tambon Salaya
Amphor Nakhon Chaisri
Nakhon Pathom 73170
Thailand

THAILAND

94

Prasit Khaosumang. *The evaluation of implementation of population education curriculum (S. 361).* M. Ed. thesis, Mahidol University, 1982. 170 p. Unpublished. In Thai with English abstract.

OBJECTIVES

To study the results of the implementation of the Population Education course in terms of objectives, content, teaching methods and evaluation with the end in view of providing suggestions for future improvements in teaching the course.

METHODOLOGY

Sample: 11 teachers who taught the population education course under study and 287 students who were taking this course from every public secondary school in Educational Region 6

which offered this course in the second semester of academic year 1982. Other respondents included the committee that prepared the Teachers' Guide on Population Education.

Data collection and analysis technique: Interviews with teachers and questionnaires from students.

FINDINGS

1. The objectives of the course were considered satisfactory.

2. The contents of the course were considered satisfactory.

3. The teaching methods used were found inadequate to effectively teach population education.

4. The evaluation tests were found satisfactory.

5. The teachers found instructional materials and teachers' guides inadequate.

6. The students were not adequately prepared to learn by the problem-solving method.

7. Students also stated that teaching learning aids were inadequate with very few references in the libraries. They also remarked that the teaching method employed by teachers rendered the course uninteresting.

DESCRIPTORS: *Course Evaluation; Secondary School Curriculum; Thailand.*

SOURCE: Director
Population Education Project
Department of Education
Faculty of Social Sciences
and Humanities
Mahidol University
25/25 Moo 5, Tambon Salaya
Amphor Nakhon Chaisri
Nakhon Pathom 73170
Thailand

THAILAND

95

Suwapan Yarnasarn. *Impact of population education on family size preference of higher secondary school students in Bangkok Metropolitan.* M. Ed. thesis, Mahidol University, 1979. In Thai with English abstract.

OBJECTIVES

To study the impact of population education on family size preference by comparing the family size preference between the students completing the population education course and those who did not take the course.

METHODOLOGY

Sample: 800 students of higher secondary schools in Bangkok, divided into two groups of 400 students each - where the first group completed a population education course and the second did not take the course.

Data collection and analysis technique: Questionnaires.

FINDINGS

1. The students completing the population education course wanted a

smaller family size than those who did not take the course. This difference is significant at 0.01 level. The result accepted the hypothesis, "the students who took the course in population education had smaller family size preference than the students who did not take the course".

2. When the variables of sex, the number of siblings, occupation of the leader of the family, educational level of the leader of the family and the community of residence were controlled, the students who completed the population education course wanted a smaller family size than those who did not take the course. This difference is significant at the 0.01 level. The result accepted the hypothesis. "When the variables of sex, the number of siblings, occupation of the leader of the family, educational level of the leader of the family and the community of residence were controlled, the students who took the population education course had smaller family size preference than the students who did not take the course".

DESCRIPTORS: *Student Attitudes; Secondary School Students; Family Size Norms; Thailand.*

SOURCE: Director
Population Education Project
Department of Education
Faculty of Social Sciences
and Humanities
Mahidol University
25/25 Moo 5, Tambon Salaya
Amphor Nakhon Chaisri
Nakhon Pathom 73170
Thailand

Section Six

PROGRAMME EVALUATION

Section Six

PROGRAMME EVALUATION

A. Analysis of the Studies

This section includes studies evaluating the impact and outcomes of the national population education programmes in the countries. More specifically, a programme evaluation looks into the effectiveness of the design and operation of the various components during and after the process of implementation to identify strengths, weaknesses and outcomes. Basically, there are two types of programme evaluation: formative evaluation occurs during the process of implementation and summative evaluation occurs after the termination of the programme. The formative evaluation looks into the strengths and weaknesses of the various activities to suggest improvements through the use of appropriate alternatives. Every programme activity has certain continuous effects and the formative assessment of these effects helps improve the programme as it goes along. Post-programme or summative evaluation is used to evaluate the outcomes of a programme, both on a short-term and on a long-term basis. The following are subject to evaluation in the country programmes: (a) objectives of the programme; (b) strategies for achieving these objectives; (c) curriculum materials; (d) teaching-learning processes; (e) personnel training; (f) programme effects on the changes in knowledge, attitude and behaviour of the learners and the impact on other educational programmes and the school system and (g) programme management.

Population education programmes in Asia and the Pacific have been subjected repeatedly to programme evaluation, mostly in the form of reviews undertaken by UNFPA, Unesco and the Government representatives. Otherwise, many country programmes have paid little attention to self-evaluation and regular monitoring of their activities. Because of this, UNFPA has instituted a monitoring system. There are three types of monitoring and evaluation activities which are regularly being conducted. The first one is the project progress report (PPR) which is a qualitative and quantitative appraisal of the project progress - designed more for reporting the status of the project than for evaluation purposes. It describes the work done during the period compared with activities and schedule stipulated in the latest project work plan, a description of delays and other problems and action taken to overcome these problems. This is prepared by the implementing agency in the country.

The tripartite project review (TPR) is an evaluation conducted by representatives from the government co-ordinating or implementing agency, the concerned sectoral ministries, the UNFPA co-ordinator and an international or United Nations executing agency, which is Unesco in this case. The TPR reviews the status of project expenditure and the feasibility of the implementation of the allocated budgets; assesses the extent to which the objectives of the project are being achieved; identifies opportunities for improving project efficiency and effectiveness as well as problems hindering efficiency and effectiveness and establishes an action schedule for following decisions taken during the TPR.

The third type is the annual country review (ACR) which examines the progress of the UNFPA-sponsored programme and the impact of the programme activities on the country's population and development programmes. It also determines the priorities of UNFPA-sponsored ongoing activities and the need for any modification of their purposes or plans of work and programmes unprogrammed funds of existing country agreement. The final form is the project termination final report which relates the principal findings and results achieved by the project. It also assesses the general impact of the project and formulates recommendations for effective utilization of project results.

Reports and documents generated from all of the reviews were many. They are not included here because they are only for internal circulation among the participants. The five studies included in this section are the few done by the countries themselves or by individuals and agencies in charge of the national population education programme. Two studies were undertaken by Unesco. All the studies included have been previously published and circulated. Two studies evaluate the design and operations of the various programme components to determine their effects. Only two countries undertook a summative evaluation of their first country programmes after termination. The study from the Philippines focuses on curriculum, training and research components and the Bangladesh study determines how various activities and strategies were carried out and how lessons learned from the findings can result in further improvements to the programme. Another study evaluates the outcomes in terms of the knowledge and attitudes of students and teachers after having been exposed to population education in the schools for the past three years. Lastly, two of the studies undertaken under the auspices of Unesco evaluate the impact of the various programme components on the general educational system of the Philippines and the Republic of Korea.

All five studies are survey studies, mainly using questionnaires to gather data. In addition to this, some used group interviews, discussions, classroom observation, and analysed textbooks and reports to obtain a holistic view of all the aspects of the programme implementation. A questionnaire on the contribution of population education to renewal and innovation elicited respondents' perceptions of the innovatory elements and the extent to which these features had influenced instruction in other subject areas. While three studies covered a nationwide sample covering the whole gamut of population education professionals in the country, i.e., project personnel, researchers, curriculum writers, resource persons, trainers, school administrators, faculty members, and secondary and primary teachers, the other two studies included a more limited sample of students and teachers found in one city and selected nine school divisions respectively.

The survey undertaken of the status of population education in the Philippines after the first country project produced the following results:

Training

1. Only 64 per cent of the total targetted number of the

elementary and secondary school teachers and 76 per cent of the total school administrators underwent training in population education. All those who received training gained the knowledge and skill necessary to teach population education.

2. All of the teachers met difficulties and problems in teaching population education in the classroom, namely, short/tight schedule, insufficient materials, inadequate training facilities/human resources and administrative constraints. However, 36 per cent of the teachers not trained in population education revealed that they were also teaching the subject. They said that they learned the population education content from the following sources: PEP prepared materials, professional reading, co-teachers and college education.

Curriculum development

1. Fifty-six per cent of the teachers, 61 per cent of the school administrators and 71 per cent of the college instructors stated that they received and used the teachers' guides and reference materials in population education.

2. Two-thirds of the respondents indicated that the contents of the population education guides were adequate.

Research

1. Only 10 per cent of the teachers and 9 per cent of the administrators conducted research while no college instructors attempted any research. The respondents stated that they did not undertake research because of time constraints, they were not interested in it and it was not required.

2. Almost all the school administrators faced problems in evaluating and implementing population education. Lack of evaluation instruments, lack of knowledge of the evaluation process and its being a laborious process were the problems met in the evaluation of population education. The problems met in the implementation of population education on the other hand included time constraints, lack of funds and work overload.

3. The latest formative evaluation of the population education programme in Bangladesh showed that all but four of the project activities were completed according to the work plan. The programme was also successful in the inclusion of population education content in the textbooks of Bengali, arithmetic, social studies and general science for classes IV, V, VI, VII and VIII.

The evaluation showed that the training of primary teachers was more satisfactory than the training of the secondary school teachers. Both groups considered the content of population education to be satisfactory but complained that the methodologies made use primarily of lectures and discussions and it was only very rarely that innovative techniques were used. Very few of the secondary teachers who were trained were teaching population education in the schools. Alternative training strategies will be undertaken by the programme in the future to reach all the targetted number of teachers to be trained. In fact, the training of the Madrasah teachers was delayed because of a certain sensitivity about

introducing population education in the schools.

Other findings dealt with the allocation of marks for population education in teacher training colleges; the time District Population Education Officers spend preparing and undertaking training programmes; the lack of systematic feedback; and the value of efficiently-run static libraries and mobile libraries.

4. One study which attempted to evaluate the effectiveness of the three-year population education programme in changing the knowledge and attitude of students and teachers showed that:

a) The students lacked knowledge of the basic population concepts. They were unable to define population, the causes of rapid growth of population and growth rate. The teachers were also found deficient in knowledge on basic concepts about population like growth rate, age structure, or the population situation in Asia. In fact, both trained and untrained teachers were found to have equally poor knowledge on the subject.

b) Both students and teachers unanimously approved family planning and population education in the schools. The study implied that this attitude might have been influenced by exposure to other family planning programme publicity and the mass media.

5. The two studies on the contribution of population education to educational renewal and innovation in the Philippines and the Republic of Korea included the following findings:

a) Content

The introduction of population education has developed an inter- and multi-disciplinary orientation and knowledge base from which other subjects can draw; highlighted the connection between population issues and how they affect the various aspects of the quality of life; and systematically introduced such topics as demographic processes, change of socio-economic relationship, and human sexuality and reproduction into the school subjects. Population education has not only expanded and enriched the subject areas in which population contents are integrated but it has also facilitated the development of a more coherent and integrated curriculum design. The general thrust of the contents has encouraged forward-looking and future orientation among students.

b) Methodologies

The introduction of population education has encouraged the use of learner-centred, participatory teaching-learning methods such as the discovery approach, values clarification and critical analysis of issues leading to the development of rational decision-making skills. It has also entailed the development of various teaching materials.

c) Training

Teacher training has not only helped upgrade the general level of system competence but more importantly, it has increased the teachers' awareness of the population and social problems and enabled them to examine traditional

values resulting in changes in their outlook and lifestyles. It has also encouraged experimentation with other training modalities such as self-instructional materials. This training has made students more socially aware and forward-looking and more skilled in rational decision-making.

d) Out-of-school programme

Population education has influenced the development of out-of-school population education programmes and provided a better understanding of the need for population education among the parents.

e) Specifically in the Philippines, the population education programme has tested alternative strategies and mechanisms for facilitating the use and application of the results of research to improve policy and practice.

f) In the case of the Republic of Korea, its population education programme has proven the effectiveness and efficiency of a management style or technique which was different from the rest of the countries. It proved that it can run an efficient programme by not necessarily creating a full-staffed population education unit but using part-time staff and mobilizing other agencies to implement their activities on a contractual basis. This consequently ensured the institutionalization of population education into these agencies

Summary of research trends and implications

On the basis of five studies included in this section, it is difficult to state whether countries have succeeded or failed in positively changing the knowledge, attitude and behaviour of students and teachers towards population issues; in developing teachers' competence and skills in teaching population education in the classrooms or producing a positive impact and contribution as a whole to the national population education and development programmes of the countries. As it is, the results of the evaluation of the first country project in the Philippines were not too encouraging especially in terms of training and actual teaching of population education. The Bangladesh evaluation also showed that the training of the primary teachers was satisfactory but not of the secondary teachers and those who were trained were not seriously teaching the subject in their classes. The third study aimed at finding knowledge change in students as a result of three years exposure to population education has its shortcoming in that the sample used was small and restricted to male students selected from schools in one city. Likewise, the two studies on the contribution of population education to educational renewal and innovation in the Philippines primarily made use of descriptive exploratory design following a purposive sampling procedure.

B. Exemplary Studies

BANGLADESH

96

Sharma, R.C. *Report of evaluation of population education programme in Bangladesh.* Dhaka, Population Education Programme, Ministry of Education and Religious Affairs (Education Division), 1982. 44 p.

OBJECTIVES

1. To find out to what extent the recommendations of the previous outside evaluation (April 1980) were carried out by the project.

2. To find out the work-load of the District Population Education Officers (DPEO).

3. To evaluate the effectiveness of the training workshops.

METHODOLOGY

Sample: (a) 124 primary school teachers; (b) 67 secondary school teachers; (c) 33 education officers and headmasters; (d) 11 PTI principals and instructors; (e) 22 TTC principals and lecturers; (f) 18 college teachers; (g) 8 DPEO; (h) 15 resource persons and (i) 11 project personnel from both urban and rural schools and colleges in Dhaka and Chittagong Divisions. Discussions with officials of the Ministry of Education, PCFP Division, National Commission for Unesco and the Universal Primary Education Project.

Data collection and analysis technique: Questionnaires, group interviews, discussions, and observation of classroom teaching, analysis of textbooks and reports.

FINDINGS

1. The Population Education Programme had taken action on most of the recommendations from the 1980 evaluation except the completion of the audio-visual training kit, a special issue of the Bulletin, a set of aids for DPEOs for use in their training programmes; the building of a reference library in the training institutes and colleges; undertaking staff development and developing of a regular feedback mechanism for project activities.

2. Most of the project activities were also completed according to the workplan except for the development and production of audio-visual training kit, Sociological Almanac, training of secondary school teachers and Madrasah teachers; a KAP research of Madrasah teachers and a longitudinal study.

3. One of the noteworthy achievements is the integration of population education content in the textbooks of Bengali, arithmetic, social studies and general science for Class IV in 1978, Class V in 1979, Class VI in 1980, Class VII in 1981 and Class VIII in 1982.

4. With regard to the training of primary school teachers, most of the trainers and teachers felt that the contents of population education are just right but found the demographic concepts a bit difficult to comprehend. The methodologies of teaching used consist mainly of lecture and discussions and very rarely were innovative techniques for training used.

5. It is planned to train a total of 36,150 primary teachers during the second phase of the project. Considering the number of teachers who would receive training in population education, the coverage would be hardly 50 per cent of the total number of primary teachers. Alternative training strategies have been recommended including two days intensive training in population education in conjunction with the IDA project and face-to-face training at the Thana level.

6. The training of secondary teachers was not as satisfactory as that of the primary teachers because the rate of participation was poor. Even those who had attended either did not take population education classes or they did not take any class in the lower classes where population education has been introduced. The reasons for this was shortage of teachers and lack of enthusiasm as they believe the training workshop deal with family planning programme. The teachers were generally satisfied with the content of the training programme but the methodology consisted mainly of lectures and discussion. An alternative strategy has been suggested wherein separate time allocated to the teaching of population education be integrated in the new scheme of national education where all secondary school teachers will be trained at the sub-divisional level.

7. There are 25 marks out of total 1,000 marks allotted to population education in the pre-service course of teacher training colleges, which was considered inadequate. It was suggested that it be raised to at least 50 marks or made an independent course.

8. Teachers in the Primary Teacher Institutions found that population education should not only be integrated with social studies but with other subjects as well or as a separate course.

9. The population education orientation programme is a fragmentary activity of the college level education. Although some of the trained teachers are undertaking population education, they do not perform it with seriousness since it is not part of the curriculum.

10. The training of madrasah teachers could not be started because of certain sensitivity about introducing population education in these schools.

11. The District Population Education Officers (DPEOs) spend almost most of their time preparing and undertaking training programmes. The rest are on administrative duties. While the DPEOs reported that they are getting full co-operation from the DEOs and TEOs, the DEOs expressed their inability to handle the training programmes which DPEOs are organizing.

12. There is no systematic feedback system from the teachers and schools after they have been trained. The DPEO and the Headquarters have very limited contact with the schools. Even Headquarters staff and DPEOs meet only once a year at the time of preparing the workplan.

13. The library needs financial and administrative support to function more efficiently. Not only should the Headquarter's library be updated with books but the teacher training institutes and college libraries should also have a good population education collection of reference materials.

14. More mobile libraries should be set up for the use of the other districts.

DESCRIPTORS: *Teacher Training Programmes; Supervisors; Bangladesh*

SOURCE: Executive Director
Population Education Programme
Ministry of Education and Religious Affairs
(Education Division)
House no. 62, Road no. 7/A (New)
Dhanmondi R.A.
Dhaka-9, Bangladesh

PHILIPPINES

97

Ministry of Education, Culture and Sports. Population Education Program. *Status survey in population education*. Manila, 1979. 5 p.

OBJECTIVES

1. To evaluate the implementation of the population education programme after five years.

2. With regard to the training programme, to determine the following:

a) number of trained and untrained teachers and administrators;

b) the usefulness of training programmes in terms of knowledge and skills gained by the participants;

c) problems met in training.

3. With regard to curriculum programme, to find out the following:

a) number of trained teachers and administrators who received the Teacher's Guides;

b) adequacy of the concepts in the Guides;

c) suggested concepts for inclusion in the teaching units.

4. With regard to research and evaluation, to determine the research studies conducted, the evaluation techniques/instruments used, problems met and suggestions for improvement.

METHODOLOGY

Sample: All the teachers and administrators from 92 school divisions plus the population education trained college instructors in colleges and universities in the 13 Ministry of Education and Culture regions in January 1977.

Data collection and analysis technique: Questionnaire consisting of four different forms. Form A was for trained teachers; Form B for trained administrators; Form C for the trained college instructors; and Form D for the untrained teachers.

FINDINGS

A. On Training

1. One hundred and seventy-six thousand seven hundred and forty-four or 64 per cent of the total 271,723 elementary and secondary teachers were trained to teach population education, 14,449 or 76 per cent of the total 15,661 school administrators underwent training in teaching population education and 124 college instructors in the tertiary level.

2. Almost all the teachers, school administrators, and college instructors who received population education training and responded to the survey questionnaires, stated that they had gained enough

knowledge in population education. They also stated that they gained enough skills in teaching the subject.

3. All three trained groups indicated the following problems met in teaching population education, arranged in their rank order; short/tight schedule, insufficient materials/visual aids, inadequate training facilities/human resources, and administrative constraints.

4. Thirty-six per cent of the teachers not trained in population education who responded revealed that they taught the subject. They stated that they learned their population education contents from the following sources, arranged in their rank order; PEP prepared materials, professional readings, co-teacher and college education.

B. On Curriculum Development

1. Fifty-six per cent of the teachers, 61 per cent of the school administrators and 71 per cent of the college instructors, stated that they received and used the teachers guides and reference materials in population education.

2. Two-thirds of both teacher- and school administrator-respondents indicated that the content of the population education guides was adequate. However, more concepts of the following topics are suggested: (a) determinants and consequences of population; (b) growth; (c) demography; (d) human sexuality and reproduction; (e) population policy and; (f) planning for the future.

C. On Research

1. Only 10 per cent of the teacher-respondents and 9 per cent of the school administrator-respondents conducted research/studies in population education. No college instructors attempted to do any research.

2. The respondents stated the following reasons for not undertaking research or studies, arranged in their rank order: time constraints, not interested and not required.

3. The evaluation instruments/techniques used most by the respondents (teachers, school administrators and college instructors) are tests and observation, and the least used are recitation and interview.

4. Almost all the school administrators met problems in the evaluation and implementation of population education: (a) problems in evaluation and research, in their rank order: lack of evaluation instruments, lack of knowledge in evaluation process and laborious process in evaluation; and (b) problems in the implementation of population education arranged in their rank order: time constraints, lack of funds and work overload.

DESCRIPTORS: *Training Programmes; Teacher Training Programmes; Curriculum Evaluation; Research Activities; Philippines*

SOURCE: Chief
Population Education Programme
Ministry of Education, Culture and Sports
Arroceros Street
Manila, Philippines

UNESCO

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Jayasuriya, J.E. and A. Krystall. "Study of the contribution of population education to educational renewal and innovation in the Philippines", in: Unesco. Co-ordinated Action Programme for the Advancement of Population Education. *Study of the contribution of population education to educational renewal and innovation in El Salvador, the Republic of Korea, Philippines and Tunisia.* Paris, Population Education Section, Unesco, 1980, p. 95-152.

OBJECTIVES

1. To analyse the impact of population education on educational renewal in the Philippines.

2. To identify the contributions of population education to curricular revision, development of learning materials, teaching strategies and methodology, teacher-training, research and evaluation and the educational structure.

METHODOLOGY

Sample: Superintendents, elementary and secondary school principals, division and district supervisors, college instructors, elementary and secondary school teachers, research co-ordinators and directors of population education research and training centres. Various documents were also analysed to supplement the results of the survey.

Data collection and analysis technique: Documentary analysis and survey technique.

FINDINGS

1. The content of population education introduced the following new knowledge into the Philippine curriculum - demographic processes and changes of socio-economic interrelationships, human sexuality and reproduction. For teachers, the population education sub-units added to the interest, the scope and the comprehensiveness of their instructional task.

2. The introduction of population education also made use of participatory teaching-learning methodologies which provide the development of attitudes and skills that would prepare students for their future decision-making responsibilities.

3. The population education programme served as an impetus to increased interdisciplinarity. It is through the extent to which the programme drew upon and utilized the contributions of scholars from a range of academic disciplines that the process of the development of the content of population education had significant consequences for the wider educational system.

4. The decision to integrate population content into the curriculum through the insertion of sub-units in five different subjects contributed to the development of a coherent and integrated curriculum design. The population education content was made appropriate to the objectives, content, methods and sequence of the subjects into which it was introduced.

5. The Population Education Programme's use of a variety of instructional materials also

stimulated their more widespread utilization within the educational system.

6. The in-service training which had been given to various types of educators has helped to up-grade the general level of system competence. The programme has also successfully tried new approaches to in-service training which could be used in other curricular reforms. Two of these are the use of self-instructional teacher-training modules and through the implementation of in-service training through personnel at lower levels of the educational system.

7. In addition to a variety of research activities which had been undertaken, the Programme has also facilitated the application of the results of research to improve policy and practice through a systematic research utilization programme.

8. Population education had a considerable effect on community education through the programme's direct extension into non-formal and out-of-school education specifically through the trained teachers' publicity of population education in PTA meetings, community assemblies, meeting of youth leaders and non-formal education classes. This eventually led to the integration of population education into non-formal and out-of-school educational programme.

DESCRIPTORS: *Curriculum Evaluation; Instructional Material Evaluation; Teacher Training Programmes; Philippines*

SOURCE: Population Education Section
Division of Equality of Educational Opportunity and Special Programmes
Unesco
7, Place de Fontenoy
75700 Paris, France

UNESCO

99

Jayasuriya, J.E. and A. Krystall. "A study of the contribution of population education to educational renewal and innovation in the Republic of Korea", in: Unesco. Co-ordinated Action Programme for the Advancement of Population Education. *Study of the contribution of population education to educational renewal and innovation in El Salvador, the Republic of Korea, Philippines and Tunisia.* Paris, Population Education Section, Unesco, 1980, p. 53-94.

OBJECTIVES

1. To identify the contribution of the Population Education Programme of the Republic of Korea to educational renewal with a view to deriving from the Korean experience lessons that might enhance its innovative potential in the educational context of the country itself and be suggestive for other countries interested in the promotion of educational innovation.

2. To provide an example of the formulation and implementation of a major educational programme with nation-wide coverage, so that the insights yielded by these processes can be utilized in connection with similar undertakings in Korea or elsewhere.

METHODOLOGY

Sample: Interviews conducted with key personnel of the Central Office of Population Education, a sample of educational personnel such as researchers, curriculum writers, school administrators, teachers and tertiary-level faculty and institutional heads.

Data collection and analysis technique: Comprehensive seven-part questionnaire was used to elicit respondents' perceptions of the innovatory elements and the extent to which these features had influence either instruction in other subject areas or broader aspects of the relationship between teachers and parents and the school and the community. The respondents were also asked to assess the effects of population education on the personal outlooks, lifestyles and activities of teachers and students.

FINDINGS

1. The Population Education Programme has demonstrated the success of a new management strategy of implementing a nation-wide programme of curriculum change, through the collaborative efforts of a variety of existing national educational and research institutions, under the overall direction and supervision of a central co-ordinating agency whose personnel are all part-time workers. This has resulted in rapidly diffusing the understanding and acceptance of the new programme among the key elements of the educational system.

2. The content of population education, which emphasizes the quality of life and the relationship between man and his bio-physical environment has contributed to innovations in terms of: (a) developing an inter- and multi-disciplinary knowledge base; (b) use of the clarification of attitudes and values that guide personal choices and shape individual decisions in the solution of problems; and (c) has encouraged a forward looking, future orientation among students.

3. The use of learner-centred, participatory teaching-learning methods and a variety of teaching methods has given impetus to widespread development and use of new methods of instruction to other subject areas.

4. The programme has entailed the development of a diversity of materials which has contributed to a more systematic approach to instruction and has also stimulated the development of teaching materials in other subject areas. It has also been most marked in the increased use of audio-visual aids, which teachers have been motivated to develop.

5. It has also encouraged a critical analysis of conventional evaluation methods, arising from the need to develop instruments for assessing changes in attitudes and values.

6. The teacher training programmes have resulted in the following changes among the teachers: (a) increased awareness of a diversity of social problems within their immediate surroundings and augmented the sense of responsibility for personal action; (b) careful examination of traditional values which resulted in changes in teacher outlook and lifestyles; (c) teachers' motivation for new learning was enhanced on account of the importance

of the issues under consideration, creating a climate supportive of innovative education programmes.

7. Population education has contributed to the broadening of the outlook of Korean students, making them more conscious of the problems affecting the family, the community and the nation and has also made students develop a heightened awareness of the social issues since it places population problems in the broad context of health, environmental, economic and social issues.

8. Through the integration of population education at the college level into "school and community" courses, in which students are required to participate in community service and through the teachers, the community has also become aware of the various population issues. This has consequently developed among the parents a better understanding of the need for population education in schools.

DESCRIPTORS: *Curriculum evaluation; Teaching Methods; Teacher Training Programme; Programme Planning; Korea, Rep. of*

SOURCE: Population Education Section
Division of Equality of Educational Opportunity and Special Programmes
Unesco
7, Place de Fontenoy
75700 Paris
France

C. Other Studies

BANGLADESH

100

Islam, Mahmood Aminul. *Population education programme in Bangladesh: an evaluation.* Dhaka, Population Education Programme, Ministry of Education and Religious Affairs (Education Division), 1982. 74 p.

OBJECTIVES

1. Generally, to evaluate the effectiveness of gradual introduction of population education on students' and teachers' knowledge and attitude.

2. Specifically, to determine from the students the following items: (a) background characteristics of their parents; (b) knowledge, basic concepts and awareness about population; (c) their concern about the country's population problem; (d) their perception about population issues and ideal family size; and (e) opinions about population education.

3. To determine from the teachers the following items: (a) personal characteristics; (b) attitude towards desired family size and their own contraceptive behaviour; (c) knowledge base and basic concepts about population; (d) opinion about whether religion is against family planning; (e) their concern of the country's population problem; and (f) if they consider their training in population useful.

METHODOLOGY

Sample: 350 students from 35 Boys' Secondary Schools located in

Dhaka were randomly selected and in each of these schools, two teachers - one who took training in population and other who did not - were interviewed. Sixty teachers were interviewed for this study.

Data collection and analysis technique: Two sets of questionnaires, one for the students and one for teachers. The respondents were interviewed using these questionnaires. Frequency distribution and percentages and means were used to analyse the data.

FINDINGS

A. Results of Students' Survey

1. Generally, the students were found wanting in precise knowledge and basic concepts about population although this was for the third year that they had been reading about population in the textbooks. They were unable to define the term population, state fully the reasons for rapid growth of population, and lacked conception about the growth rate.

2. The majority of the students showed their awareness and concern about the population problem and population issues. Eighty-three per cent of the students considered a two-child family as the ideal. They also could put forward reasons in support of their preference for a small family. They were also near unanimous about the need for population education.

3. The findings of this study should, however, be interpreted with caution because of the small sample which were all selected from schools located in Dhaka. The second reason is that the students as a part of the population are being regularly exposed to media publicity including the utterances of the leading public figures about the urgent need for family planning and population control.

The major consideration which led to the introduction of population education in schools was to widen and sharpen the knowledge base of the students with hard facts and basic concepts of population change and its consequences. The findings show that this important purpose of the Population Education Programme could not be achieved satisfactorily.

B. Results of Teachers' Survey

1. Ninety per cent of the teachers interviewed were graduates and above, their mean age was around 37 years and that of their wives around 29 years. Almost all were married for a mean period of about 13 years and had on an average 3.6 children. The percentage of teachers having 5 or more living children was quite high at nearly 24 per cent. Judged from their personal characteristics the trained and untrained teachers formed a homogenous group.

2. The contraceptive prevalence rate among the teachers was quite high at about 61 per cent. Of those not currently contracepting almost 30 per cent (62 per cent of the trained and 20 per cent of the untrained teachers) stated they did not intend to contracept in the future.

3. About 69 per cent of the teachers did not want any more children. This roughly corresponded with 65.5 per cent of the teachers - 68.4 per cent trained and 63.9 per

cent untrained - who had 3 or more children. Although not verified with the replies to the questionnaire, this appears to be an indication that teachers having less than 3 children would like to have more. This attitude does not conform to the two-child family being advocated by the Government. Population training in this respect did not have much effect in altering that attitude.

4. The teachers, both trained and untrained, were found deficient in knowledge and basic concepts about population like growth rate, age structure of the population and population situation in the Asian region and developed countries.

5. Most of the teachers were, however found to have a positive attitude to family planning. They thought religion was not opposed to contraceptive practice although it was an impediment to the family planning programme.

6. The trained teachers showed more concern about the population problem compared to the untrained teachers. All the trained teachers found occasions to discuss the problem with their relatives, friends and neighbours.

7. These findings should also be treated with caution because of the extremely small size of the sample selected from schools in Dhaka city.

DESCRIPTORS: *KAP; Student Attitudes; Teacher Attitudes; Population Awareness; Training Programmes; Bangladesh*

SOURCE: Executive Director
Population Education Programme
Ministry of Education and Religious Affairs
(Education Division)
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Dhaka-9, Bangladesh

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